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Dräger Gas List 2015

List of detectable gases and vapours

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Gas list to find a suitable fixed installed
Dräger gas detection instrument for the detection
of a specified substance

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Subject to alteration

Search Indexes

This list of gases consists of three search indexes and the main part. The search indexes are suitable to find the substance in question by having only its CAS-number, its name (including short name or technical abbreviation), or its sum formula.

Using the search indexes you will obtain the substance's associated number to look for in the list of gases.

If the substance is not listed, this does not necessarily mean that this substance is not detectable.

Search Index for CAS-Number

The CAS-number is a worldwide used code to identify a chemical substance non-ambiguously. This number is issued by the Chemical Abstracts Service and is the easiest way to characterise a chemical substance. Knowing the CAS-No. means to be able to get comprehensive information and links from internet and search engines.

The considered substance is unambiguously specified by the CAS-No.

Search Index for Name / Abbreviation

When sorting alphabetically the chemical prefixes such as n-, i-, sec-, tert-, N-, N.N-, or numbers were omitted. Please proceed correspondingly when looking for a substance.

When searching 1,2-Dichloroethane look for Dichloroethane, find tert-Butanol under Butanol and Methyl-tertbutylether under Methylbutylether.

This search index also lists short names or technical abbreviations. However these names may be ambiguous from chemical aspects (e.g. Dimethyl ether and Dimethoxy ethane usually both are short-named as 'DME').

Furthermore refrigerants were considered. The so called ASHRAE code is basically preceded by 'R' (meaning refrigerant) although in other countries characters such as 'F', 'FCK', 'HFA', 'HFC', 'HFO' or names such as 'Freon', 'Frigen' and 'Propellant' etc. are used. So, if you look for e.g. Freon 134a please search for R134a.

Search Index for Sum formula

For every chemical formula - normally given as a semi-structure formula - a sum formula exists. A sum formula is formed according to the Hill-system:

Within each sum formula the element symbol C (for Carbon) is on the first place, the element symbol H (for Hydrogen) on the second, followed by all other element symbols in alphabetical order. For every element symbol the order is given with increasing number of atoms of the corresponding molecule. So it seems a little bit strange having a sum formula of e.g. ammonia H_3N , of sulphur dioxide O_2S and of hydrogen cyanide CHN .

Having the chemical formula of a substance, the individual element symbols have to be summarised and sorted accordingly. With the sum formula obtained this way you can go into the search index for sum formulas to get the substance's associated number.

Example: CH_3COOH

Sum formula is $C_2H_4O_2$. This is the sum formula of acetic acid. But you can verify that this is also the sum formula of Methyl formate ($HCOOCH_3$).

Attention: Sum formulas may be ambiguous!

The Gas List

This list is the real list of gases. For each substance there are at least three lines. Besides the columns 1 and 16 of the current number the gas list comprises 20 further columns which are explained in the following:

Column 2: Substance, Chemical formula

The main name covers two columns in the first line. The 2nd line shows the CAS-No., and the 3rd line shows the chemical formula.

Column 3: Shortn., S-formula

If there is a technical abbreviation known it is listed in this column 2nd line. The sum formula is printed in the 3rd line.

Column 4: Further synonyms

If further names are known the three most usual ones are listed here.

Column 5: Molw. g/mol

In the first line the molecular weight (mol weight) M is listed. The mol weight is used in many calculations, e.g. you can calculate the relative density of a gas or vapour by dividing value M by 28.96. If the result is less than 1 the gas is lighter than air. In most cases the result will be greater than 1 - so it is heavier than air. In case of vapours, however, the maximum vapour pressure (the maximum concentration at a given temperature) in an air/vapour mixture has to be regarded (see vapour pressure column 7): Vapours can never exist in a 100 %v/v-concentration! Below the mol weight the value of the relative density compared to air is listed. It is marked by a subsequent 'r' (for relative).

Example: n-Butanol: 2.56 r

Vapours of n-Butanol are 2.56 times heavier than air.

By using the mol weight M you can convert concentrations given in %v/v (= % by vol.) or ppm to obtain g/m³ or mg/m³.

Using the mol weight M you can also calculate the density of a gas in kg/m³ (at 20 °C and 1013 mbar) by simply multiplying with a factor of 0.04179:

Example: The mol weight of Propane is 44.1 g/mol, so the density of Propane is

$$\rho = 0.04179 \cdot 44.1 = 1.843 \text{ kg/m}^3$$

If density ρ and mol weight M are known you are able to calculate the amount of liquid to be evaporated in a given volume to obtain a defined vapour concentration. However, it is very important that this liquid is evaporated completely. This requires a sufficiently high vapour pressure.

Use the 'calibration chamber formula':

To obtain a vapour concentration c in a volume of 3 litres at 20 °C and 1013 mbar you have to insert the following amount F (in microlitres) of the liquid:

$$F = 1.2478 \cdot \frac{M}{\rho} \cdot c$$

Example: Ethyl acetate, M = 88.1 g/mol, $\rho = 0.90$ g/ml, LEL = 2.0 %v/v.

To obtain 50 %LEL (c = 1.0 %v/v) vapour of Ethyl acetate in the 3 litres calibration chamber insert

$$F = 1.2478 \cdot \frac{88.1}{0.90} \cdot 1.0 = 122 \text{ microlitres}$$

of liquid Ethyl acetate.

If for the substance in question the calibration chamber procedure is applicable the value of the amount to be inserted into the 3 litres calibration chamber to obtain 50 %LEL is printed below the value of the density. It is marked by a subsequent 'v' (for volume).

Example: n-Hexane: 81 v

You need to insert 81 microlitres into the Dräger Calibration Chamber to obtain 50 %LEL of hexane vapour.

Column 6: Dens. g/ml

In this column the density ρ of the liquid in g/ml (= g/cm³) at 20 °C is listed. This value exists only for liquids, so gases are indicated by 'Gas'.

Column 7: Boil. °C

This column shows the boiling point of the substance in °C (at 1013 mbar). Below the boiling point given in °C the boiling point is printed in °F. This value is marked by a subsequent '°F'.

Column 8: p₂₀ mbar

Vapour pressure p₂₀ of a liquid at 20 °C given in mbar (= hPa). Vapour pressure is only defined for liquids. So for gases

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instead of the vapour pressure you will find the marking 'Gas' in this column. The vapour of each liquid forms a pressure which depends on the nature of liquid and the liquid's temperature. If the vapour pressure is low, the liquid evaporates slowly and thus only produces low vapour concentrations (for those flammable liquids the flashpoint is usually high). The maximum vapour concentration c_{\max} (saturated vapour concentration in %v/v), which can only form in closed containments, can be calculated as follows:

$$c_{\max} = 100 \cdot \frac{p_{20}}{1013 + p_{20}}$$

If the vapour pressure is considerably lower than the atmospheric pressure, c_{\max} can be estimated by dividing the given vapour pressure by the environmental atmospheric pressure.

Example: n-Nonane, $p_{20} = 5$ mbar, so

$$c_{\max} = 100 \cdot \frac{5}{1013} = 0.49 \text{ %v/v}$$

So at 20 °C no vapour concentrations higher than 4900 ppm n-Nonane can exist. Higher temperatures or lower atmospheric pressure are necessary to produce higher vapour concentrations. Since the Lower Explosion Limit is 0.7 %v/v, even in a closed containment at 20 °C no explosive vapour/air-mixtures of n-Nonane can form. This is the reason why the 'calibration chamber formula' does not apply for substances with a low vapour pressure: at 20 °C it is not possible to produce vapour concentrations of e.g. 0.6 %v/v of n-Nonane.

Column 9: Flpt. °C

This column shows the flashpoint of flammable liquids, preferably based on the source PTB. Flammable gases do not have a flashpoint and are marked by 'Gas'. Gases or liquids being nonflammable are marked by 'n. a.'.

The empirically determined flashpoint is defined as the temperature of a flammable liquid which (in a closed containment) is needed to obtain an ignitable vapour concentration above the liquid's surface. If ambient temperature and liquid temperature are clearly below the flashpoint (e.g. 10 °C lower), the liquid cannot be ignited.

Example: n-Nonane, flashpoint 31 °C, is not ignitable at 20 °C.

The relatively high flashpoint of n-Nonane is arising from its low vapour pressure. As already shown it is not possible to produce vapours of 100 %LEL under normal conditions (20 °C). As the flashpoint is a temperature you can also convert a flashpoint F given in degrees Celsius into a flashpoint F given in degrees Fahrenheit using the conversion

$$F_{\text{F}} = \frac{9}{5} = F_{\text{C}} + 32$$

Example: n-Nonane, flashpoint is 31 °C,

$$F_{\text{F}} = \frac{9}{5} = 31 + 32 = 87.8 \text{ °F.}$$

Below the flashpoint F given in °C the flashpoint is printed in °F. This value is marked by a subsequent °F'.

Columns 10, 11, 12, 13 and 14: LEL

These columns show the lower explosion limit in %v/v. Non-flammable gases and liquids are marked by 'n. a.'. If there is a void field this indicates that the LEL is unknown. Five values coming from different sources are listed here:

PTB: Source: Brandes, Möller (PTB): Safety Characteristic Data, Vol. 1: Flammable Liquids and Gases, Wirtschaftsverlag NW, 2nd Edition, 2008

IEC: IEC 60079-20-1: 2010, Explosive atmospheres - Material characteristics for gas and vapour classification

NIOSH: NIOSH Pocket Guide to Chemical Hazards, DHHS (NIOSH) Publication No. 2005-149, Sept. 2007.

NFPA: NFPA Fire Protection Guide to Hazardous Materials, 14th edition, 2010 (including the NFPA 497).

RUS: GOST R-51330.19:1999, Edition 2000 / 2007, originating from the former IEC-publication 60079-20:1996, but with several modifications.

If there is no LEL available from these five sources, LELs coming from other sources (e.g. the GESTIS database on hazardous substances) have been used, indicated by a *. Furthermore LELs calculated by halving the stoichiometric concentration for an approx. estimation are marked by **.

Conversion (valid at 20 °C):
By means of the mol weight (column 5) you can convert the LEL to g/m³ by



multiplying the LEL given in %v/v with the mol weight M and dividing it by 2.4.

Example: n-Nonane, M = 128.3 g/mol,
LEL = 0.7 %v/v, so

$$\text{LEL}_{\text{g/m}^3} = \frac{128.3}{2.4} \cdot 0.7 = 37.4$$

The LEL of n-Nonane is 37.4 g/m³.

And vice versa:

$$\text{LEL} = \frac{2.4}{M} \cdot \text{LEL}_{\text{g/m}^3}$$

Below the LELs given in %v/v the corresponding values given in g/m³ are listed. They are enclosed in parenthesis.

Column 15: AIT °C

This column shows the auto-ignition temperature (AIT) of flammable gases and vapours. For non-flammable substances this column shows 'n. a.'. If known, the explosion group with subgroup, IIA, IIB or IIC (acc. to standard IEC (EN) 60079-0), is listed in the 2nd line. If the ignition temperature is known, the 3rd line contains the temperature class.

Electrical devices to be operated in potentially explosive atmospheres containing the considered flammable substance must at least be marked with the given explosion group and temperature class:

Example: Allyl alcohol:
AIT = 375 °C, IIB T2.

An electrical device must at least be marked IIB T2. Devices marked IIA T2 or IIB T1 are not allowed to be used in atmospheres where allyl alcohol may be present in potentially explosive concentrations.

Column 17 and 18: TLV Germ. and TLV USA

If available this column lists toxic limits as threshold limit values (TLV) or workplace limit values (WPL) in ppm.

TLV Germ.: Source: TRGS 900, last update in September 2012.

TLV USA: Source: OSHA.
If no OSHA value available: NIOSH.

Commonly the TLVs are average values, but sometimes ceiling values (marked by a 'c') are listed. In no case ceiling values are allowed to be exceeded.

If neither the TLV Germ. nor the TLV USA is listed this does not necessarily mean that the considered substance is not toxic. Short-term limit values have not been regarded in this gas list.

Conversion (valid at 20 °C):

By means of the mol weight (column 5) you can convert the TLV to mg/m³ by multiplying the TLV given in ppm with the mol weight M and dividing it by 24.

Example: n-Nonane: M = 128.3 g/mol,
TLV = 200 ppm:

$$\text{TLV}_{\text{mg/m}^3} = \frac{128.3}{24} \cdot 200 = 1069$$

The TLV is 1069 mg/m³.

Vice versa:

$$\text{TLV} = \frac{24}{M} \cdot \text{TLV}_{\text{mg/m}^3}$$

Below the TLV given in ppm the corresponding values given in mg/m³ are listed. They are enclosed in parenthesis. As these figures are exactly calculated they may slightly be different from officially issued values which are mostly rounded values.

Column 19: MP - Measuring principle

The measuring principle is listed using the following abbreviations:

CT - catalytic, transmitter or sensing head using heat of reaction principle

IR - infra-red absorption, transmitter with IR sensor

EC - transmitter with electrochemical sensor

PY - pyrolysis oven and transmitter with electrochemical sensor

OP - infra-red absorption, open path measuring system

Column 20: Detectable by ...

This column lists the transmitters by means of which the considered substance is detectable. This information is self-explaining.

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Column 21: Suitable measuring ranges

PEX 3000, SE Ex, P 5200 and P 8200

For catalytic bead sensors and transmitters the full scale deflection is always 100 %LEL. The 10 %LEL sensor can also be used for the detection of the listed substance. In this case the full scale deflection is 10 %LEL.

Dräger PIR 7000 type 334 and 340

If for the substance in consideration there is an individual data set which can be selected from a gas library for direct configuration this is indicated by the term Gas-Library.

The minimum and maximum f.s.d. in %LEL is listed. Separated by a '/' mostly the lowest f.s.d. in ppm is also listed.

A '\$' indicates substances being surely detectable but not yet having undergone verifying measurements - so no calibration hints can be issued so far.

A '?' indicates substances which are reasonably assumed to be detectable but have not been verified so far in the application laboratory.

A '&' indicates that special hints for application and calibration have to be requested for the detection of this substance.

The information given for PIR 7000 is also valid for the P 8700 of the same type.

Dräger P 5700 type 334 and 340

With this transmitter only the given full scale values are configurable. So, '50 + 100 %LEL' means that in the unit %LEL only both these full scale deflection values can be configured.

Dräger PIR 3000

The full scale value is always 100 %LEL. Other measuring ranges are not suitable.

A '?' indicates substances which are reasonably assumed to be detectable but have not been verified so far in the application laboratory.

A '!' indicates that for the P 5310 and P 8310 or the DrägerSensor IR itself a special calibration routine has to be performed for the detection of this substance.

Pulsar

The expression 'Pulsar' covers all the variants Polytron Pulsar, Polytron Pulsar 2 and Polytron Pulsar duct mount. The full scale deflection value is 1 or 4 / 8 LELm, where 1 LELm refers to the duct mount variant. For certain substances cross sensitivity factors (CSF) are listed, these are valid in respect to propane (LEL = 1.7 %v/v) and the substance's LEL given here. The CSF is listed in column 22.

Polytron 7000 and Polytron 8000

The minimum, standard, and maximum full scale deflections are listed.

If the substance in consideration is not stored in the sensor's EPROM the full scale deflection values have to be multiplied by the given factor.

Example: Morpholine with Polytron 7000 and sensor NH₃: '50 / 100 ppm x 4' means that the configured f.s.d. of 50 or 100 ppm NH₃ corresponds to 200 or 400 ppm Morpholine. So when applying Morpholine to the sensor the reading has to be multiplied by factor 4 to obtain the true concentration.

Concerning the sensors OV1, OV2, H₂S, and NH₃, additionally the gas type to be configured is recommended:

Example: 1-Hexene: 'as Aald x 2' means:

To measure 1-Hexene configure for Aald = Acetic aldehyde (and calibrate for Acetic aldehyde) and multiply the reading by 2 to have the true concentration of 1-Hexene.

In some cases this factor may even be 0.5, so the reading has to be divided by 2.

Column 22: Important Remarks

Here you will find remarks concerning sensor poisoning by corrosive or polymerizing influences for catalytic bead sensors as well as information about response times (t_{20} , t_{50}).



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Measuring performance

If the considered substance is subject of a measuring performance certificate (measuring function for explosion protection) this is indicated by 'performance approved'.

Furthermore there are remarks like e.g. 'detectability expected' or 'on request'. Also, the relative sensitivities S in respect to the target gas might be of special interest.

For electrochemical sensors the given relative sensitivities S are only valid for new sensors and a value fluctuation of about $< \pm 30\%$. A '(L)' indicates that the sensor is only suitable to be used for leak detection of this substance.

Example: OV1-sensor for Butylene oxide: 'S = 0.4 (L)' means the sensitivity of the OV1-sensor exposed to Butylene oxide is 40 % compared to Ethylene oxide. For Butylene oxide this sensor should only be used to detect leaks.

What is leak detection?

A leak is an unpredictable abnormal release of gases or vapours of higher concentrations. A leak has to be regarded as an exceptional event of a relative short duration. In case of normal operation there is only clean air (without even low concentrations of the target gas or vapour).

A gas detection system for leak detection is not to measure a gas concentration but to give alarm reliably if a preset alarm threshold is exceeded. That is why for leak detection rather the t_{20} or t_{50} response times are relevant instead of the t_{90} -time. The given measuring ranges marked by 'L' or '(L)' have to be interpreted as a range where an alarm threshold of the control unit can be set (choose e.g. 20% or 40% of full scale deflections).

After a gas release a leak gas detection system needs to be checked for proper function.

Mixtures of gases and vapours

Not to expand this gas list unnecessarily, only pure substances, but not mixtures of gases and vapours, are listed. This is especially true for mixtures of flammable solvents and fuels which are differently blended and handled under different product names by different manufacturers. For %LEL-measurement the gas detection instrument has to be calibrated for those substances in relevant share in the mixture, which are detected with the least sensitivity. From this guideline calibration procedures based on pure substances can be derived. For example to detect Kerosene by means of a catalytic bead sensor commonly a Nonane-calibration is recommended. Moreover, a catalytic bead sensor calibrated for n-Nonane is also very suitable to detect numerous hydrocarbon mixtures such as gasolines, petrols, aviation fuels and jet petrols as well as Naphtha, Solvent Naphtha, Varnish Makers & Painters Naphtha (VMPN), White Spirit, etc. However, whether such a calibration leads to safe detection in a given application can only be verified by thoroughly observing the individual substances of content or even by performing the according measurement tests in the laboratory.

Search Index for CAS-Number

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287-23-0	100	589-38-8	248	1066-40-6	431	7664-41-7	20	13952-84-6	65
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302-01-2	252	591-78-6	247	1321-74-0	182	7697-37-2	319	16747-26-5	427
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2D	115	Acrylonitrile	11	n-Amyl alcohol	24
2VP	444	Adipic ketone	108	tert-Amyl alcohol	25
3MBTA	284	Aetyl-2-propanone	6	n-Amylamine	26
AA	13	AGE	17	Amyl carbinol	246
Aald	1	Allyl acetate	12	Amyl chloride	28
AC	256	Allyl alcohol	13	i-Amylchloride	27
Acetal	138	Allyl aldehyde	9	n-Amylchloride	28
Acetaldehyde	1	Allylamine	14	n-Amylene	346
Acetaldehyde diethyl acetal	138	Allyl bromide	15	Acetic acid i-amylester	21
Acetic acid	2	Allylcarbinol	53	Acetic acid n-amyl ester	22
Acetic acid allyl ester	12	Allyl chloride	16	i-Amyl formate	29
Acetic acid-2-butoxyethyl ester	55	Allylene	378	Amyl hydride	343
Acetic acid butylester	59	Allyl-2,3-epoxypropylether	17	Amylketone	147
Acetic acid chloride	7	Allylglycidylether	17	tert-Amyl methyl ether	30
Acetic acid dimethyl amide	154	Allyl methacrylate	18	i-Amyl methyl ketone	281
Acetic acid-1,1-dimethyl ethylester	60	Allyl-2-methyl acrylate	18	n-Amyl methyl ketone	239
Acetic acid ethenyl ester	436	1-Allyloxy-2,3-epoxypropane	17	AN	4
Acetic acid ethyl ester	195	Allyl trichloride	412	Anhydrous ammonia	20
Acetic acid methoxy propylic ester	276	AMA	18	Aniline	31
Acetic acid methyl ester	277	Aminobenzene	31	Anisole	32
Acetic acid-2-methylpropyl ester	58	3-Aminobenzo trifluoride	419	Anol	102
Acetic acid pentyl ester	22	1-Aminobutane	64	Anon	103
Acetic acid propyl ester	365	2-Aminobutane	65	Antimony-(V)-chloride	33
Acetic acid sec butyl ester	57	2-Amino-1-butanol	19	Antimony pentachloride	33
Acetic acid-o-trimethyl ester	422	2-Aminobutan-1-ol	19	Arsenic hydride	34
Acetic acid vinyl ester	436	2-Aminobutanol	19	Arsenic trihydride	34
Acetic aldehyde	1	Aminocyclohexane	106	Arsine	34
Acetone	3	1-Amino-3-dimethylaminopropane	157	Azabenzene	379
Acetone dimethylacetal	153	Aminoethane	197	Azacyclohexane	352
Acetonitrile	4	2-Aminoethanol	190	Azacyclopropane	209
Acetophenone	5	Aminoethylene	209	Azine	379
1-Acetoxy-2-butoxyethane	55	1-Amino-2-ethylhexane	215	Azirane	209
1-Acetoxyethylene	436	Aminohexahydrobenzene	106	Aziridine	209
1-Acetoxypropane	365	1-Aminohexane	251	B2A	65
2-Acetoxypropane	364	Aminomethane	280	BCHD	327
Acetyl acetone	6	3-Aminomethyl heptane	215	Benzenamine	31
Acetyl benzene	5	1-Amino-2-methylpropane	63	Benzene	35
Acetylchloride	7	2-Amino-2-methylpropane	66	Benzene chloride	88
p-Acetyldehyde	337	1-Aminopentane	26	Benzene tetrahydride	104
Acetyl dimethylamine	154	1-Aminopropane	367	Benzol	35
Acetylene	8	2-Aminopropane	366	Benzyl chloride	36
2-Acetyl propane	310	3-Aminoprop-1-ene	14	Bicyclo(2.2.1)hepta-2,5-diene	327
ACN	11	3-Aminopropyl dimethylamine	157	cis-Bicyclo(4.4.0)decane	110
Acroleic acid	10	1-Amino propylene	14	Bicycloheptadiene	327
Acrolein	9	Ammonia	20	Bicyclohexyl	136
Acrylic acid	10	AMS	317	Biethylene	41
Acrylic acid ethyl ester	196	i-Amyl acetate	21	Bis(2-ethoxyethyl)-ether	143
Acrylic acid methyl ester	278	n-Amyl acetate	22	Bis(2-methoxyethyl)-ether	144
Acrylic aldehyde	9	Amyl acetic ester	22	Bis(methoxypropyl)ether	178
Acrylo-i-butyllic ester	61	3-Amyl alcohol	345	Bis(trimethylsiloxy)methylsilane	236
Acrylobutyllic ester	62	i-Amyl alcohol	23	Bis-trimethylsilyl-amine	243

Substance	No.	Substance	No.	Substance	No.
1,2-Bis-(dimethyl amino)-ethane	400	2-Butoxyethanol acetate	55	Butyl ethylene	249
BMA	77	2-Butoxyethyl acetate	55	tert-Butyl ethyl ether	200
Boroethane	118	1-Butoxy-2-hydroxy ethane	54	i-Butyl formate	73
Boron bromide	37	1-Butoxy propan-2-ol	56	n-Butyl formate	74
Boron chloride	38	1-Butoxy-2-propanol	56	n-Butyl glycol	54
Boron hydride	118	n-Butoxypropanol	56	Butyl glycol acetate	55
Boron tribromide	37	2-Butyl acetate	57	n-Butyl mercaptan	75
Boron trichloride	38	i-Butyl acetate	58	tert-Butyl mercaptan	76
Boron trimethyl	426	n-Butyl acetate	59	Butyl methacrylate	77
Bromine	39	sec-Butyl acetate	57	n-Butyl methacrylate	77
Bromoallylene	15	tert-Butyl acetate	60	tert-Butyl methane	169
2-Bromo-2-chloro-1,1,1-trifluoroethane	234	i-Butyl acrylate	61	Butyl methanoate	74
Bromoethane	199	n-Butyl acrylate	62	tert-Butyl methyl ether	286
Bromoethyl	199	i-Butyl alcohol	46	Butyl methyl ketone	247
Bromomethane	282	n-Butyl alcohol	47	i-Butyl methylketone	287
3-Bromopropene	15	sec-Butyl alcohol	45	i-Butyl-2-methyl propanoate	69
BTBAS	67	tert-Butyl alcohol	48	Butyl oxitol	54
BuAc	59	Butyl aldehyd	80	Butyl-2-propenoate	62
1,2-Butadiene	40	i-Butyl amine	63	2-Butyne	78
1,3-Butadiene	41	n-Butylamine	64	But-2-yne	78
1,3-Butadiene monoxide	42	sec-Butylamine	65	i-Butyraldehyde	79
i-Butanal	79	tert-Butylamine	66	n-Butyraldehyde	80
n-Butanal	80	Bis(tert-butylamino)silane	67	Butyric acid aldehyde	80
i-Butane	43	tert-Butyl arsine	68	i-Butyric aldehyde	79
n-Butane	44	N-Butyl-1-butanamine	119	n-Butyric aldehyde	80
1-Butane amine	64	i-Butyl-i-butyrate	69	C11	435
2-Butane amine	65	i-Butyl carbinol	23	C4=	50
1-Butanethiol	75	n-Butyl carbinol	24	C4=	51
Butane-1-thiol	75	sec-Butyl carbinol	285	C4==	41
1-Butanol	47	Butyl carbonic acid	344	1-Caprylene	334
2-Butanol	45	Butyl cellosolve	54	Carbinol	269
Butan-1-ol	47	Butyl cellosolve acetate	55	Carbon dioxide	81
Butan-2-ol	45	Butylchloride	71	Carbonic acid anhydride	81
i-Butanol	46	i-Butyl chloride	70	Carbonic acid diethyl ester	142
n-Butanol	47	n-Butyl chloride	71	Carbonic acid dimethyl ester	160
tert-Butanol	48	tert-Butylchloride	72	Carbonic acid ethyl methyl ester	292
2-Butanone	295	1-Butylene	50	Carbonic anhydride	81
Butan-2-one	295	2-Butylene	51	Carbonic oxide	82
2-Butenal	49	i-Butylene	52	Carbon monoxide	82
1-Butene	50	1,3-Butyleneglycol monomethyl ether	270	Carbon oxide	82
2-Butene	51	Butylene oxide	187	Carbon oxychloride	347
But-1-ene	50	1,2-Butylen oxide	187	Carbon tetrachloride	83
i-Butene	52	Acetic acid i-butylester	58	Carbonyl chloride	347
3-Butene-1-ol	53	Acetic acid tert-butyl ester	60	Carboxyethane	359
Butenine	437	Formic acid i-butylester	73	Carvene	265
1-Buten-3-one	443	Propenoic acid i-butylester	61	Cellosolve acetate	192
3-Butenyne-1	437	i-Butyl ethanoate	58	CG	347
1-Buten-3-yne	437	n-Butyl ethanoate	59	CHA	106
Butenyne	437	tert-Butyl ethanoate	60	Chlorine	84
1-Butoxybutane	120	Butyl ether	120	Chlorine dioxide	85
2-Butoxyethanol	54	Butyl ethyl acetaldehyde	212	Chlorine peroxide	85

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Substance	No.	Substance	No.	Substance	No.
Chlorine trifluoride	86	2-Chlorotoluene	98	DEC	142
2-Chloroacetaldehyde	87	a-Chlorotoluene	36	cis-Decahydronaphthalene	110
3-Chloroallyl chloride	132	o-Chlorotoluene	98	cis-Decaline	110
Chloroallylene	16	Chlorotrifluoride	86	Decamethyl cyclopentasiloxane	111
Chlorobenzene	88	Chlorotrifluoroethyldifluoromethyl ether	185	n-Decane	112
Chlorobenzol	88	Chlorotrifluoroethyldifluoromethylether	262	1-Decene	113
1-Chlorobutane	71	CHO	105	n-Decylene	113
3-Chloro-2-butanone	89	Cinnamene	384	DEGDDE	143
1-Chlorobut-2-ene	90	CMME	95	DEGDME	144
3-Chloro-i-butene	279	Colamine	190	DEK	147
1-Chloro-1,1-difluoroethane	91	CP	107	DEMS	139
Chlorodifluoromethane	92	Crotonaldehyde	49	Desflurane	114
2-Chloro difluoromethoxytrifluoroethane	185	Crotonic aldehyde	49	Deuterium	115
Chlorodimethyl ether	95	Crotonylene	78	Diacetone alcohol	116
Chlorodimethylsilane	93	Crotlyl chloride	90	Diacetylmethane	6
1-Chloro-2,3-epoxypropane	186	Cryofluorane	134	Diamine	252
2-Chloro-1-ethanal	87	Cumene	99	1,2-Diaminoethane	207
Chloroethane	201	Cumol	99	1,2-Diaminopropane	372
2-Chloroethan-1-ol	94	Cyanoethylene	11	Di-i-amyl ether	117
Chloroethanol	94	Cyanomethane	4	Diazane	252
Chloroethene	438	Cyclobutane	100	Diborane	118
Chloroethyl	201	Cyclohexane	101	Diboron hexahydride	118
2-Chloroethyl alcohol	94	Cyclohexanol	102	Di-n-butylamine	119
Chloroethylene	438	Cyclohexanone	103	Dibutylamine	119
1-Chloroethyl methyl ketone	89	Cyclohexatriene	35	N,N-Dibutyl-1-butanamine	407
Chloroform	410	Cyclohexene	104	Di-i-butylene	429
Chloroformic acid ethyl ester	202	3-Cyclohexene-1-aldehyde	393	Di-n-butylether	120
Chloroformic acid methyl ester	290	3-Cyclohexene-1-carbaldehyde	393	Dibutylether	120
Chloroformyl chloride	347	Cyclohexene oxide	105	Dibutyl ketone	326
Chloromethane	289	Cyclohexenylethylene	440	Di-tert-butyl peroxide	121
Chloromethoxymethane	95	Cyclohexyl alcohol	102	N,N'-Di-tert-butylsilane diamine	67
Chloromethyl	289	Cyclohexylamine	106	1,2-Dichlorobenzene	122
1-Chloro-2-methylbenzene	98	Cyclohexyl cyclohexane	136	ortho-Dichlorobenzene	122
Chloro methylbenzene	36	N-Cyclohexyl dimethyl amine	161	o-Dichlorobenzol	122
1-Chloro-3-methylbutane	27	Cyclohexylethene	439	1,1-Dichloroethane	123
Chloromethyl methylether	95	Cyclohexylethylene	439	1,2-Dichloroethane	124
Chloromethyl oxirane	186	Cyclohexyl ketone	103	1,1-Dichloroethene	125
1-Chloro-2-methylpropane	70	Cyclohexylmethane	291	1,2-Dichloroethene cis	126
2-Chloro-2-methylpropane	72	Cyclomethicone	111	1,2-Dichloroethene trans	127
3-Chloro-2-methylprop-1-ene	279	Cyclooctafluorobutane	329	1,1-Dichloroethylene	125
1-Chloropentane	28	Cyclopentadiene dimere	137	1,2-Dichloroethylene cis	126
Chloropicrin	411	Cyclopentane	107	1,2-Dichloroethylene trans	127
1-Chloropropane	370	Cyclopentanone	108	1,1-Dichloro-1-fluoroethane	128
2-Chloropropane	369	Cyclopropane	109	1,3-Dichlorohydrin	131
2-Chloropropene	96	Cylohexane amine	106	1,3-Dichloro-2-hydroxypropane	131
3-Chloro-1-propene	16	DC244 Fluid	331	1,3-Dichloroisopropyl alcohol	131
2-Chloropropylene	96	DCM	129	Dichloromethane	129
3-Chloropropylene	16	1,3-DCP	131	1,2-Dichloropropane	130
2-Chloropropylene oxide	186	DCP	132	1,3-Dichloro-2-propanol	131
Chlorosulfonic acid	97	DCS	133	1,3-Dichloro-i-propanol	131
Chlorosulfuric acid	97	DEA	140	1,3-Dichloropropene	132

Substance	No.	Substance	No.	Substance	No.
1.3-Dichloropropylene	132	Diisopropylamine	176	1.1-Dimethylethylene	52
Dichlorosilane	133	Diisopropylether	179	1.2-Dimethylethylene	51
1.2-Dichlorotetrafluoroethane	134	Diisopropyl oxide	179	Dimethylformamide	165
2.2-Dichloro-1.1.1-trifluoroethane	135	Dimazine	167	N,N-Dimethylformamide	165
Dicyclohexyl	136	Dimethoxy dipropylene glycol	178	Dimethylglycol	151
1.3-Dicyclopentadiene	137	1.2-Dimethoxyethane	151	3.4-Dimethyl hexane	166
Dideuterium	115	Dimethoxy formic acid anhydride	160	1.1-Dimethylhydrazine	167
Diethenyl benzene	182	Dimethoxymethane	152	N,N-Dimethylhydrazine	167
1.1-Diethoxyethane	138	2.2-Dimethoxypropane	153	unsym-Dimethylhydrazine	167
Diethoxy formic acid anhydride	142	Dimethyl	188	N,N-Dimethyl-2-hydroxyethylamine	156
Diethoxy methyl silane	139	N,N-Dimethyl acetamide	154	Dimethyl ketone	3
Diethylacetal	138	1.1-Dimethyl acetone	310	N,N-Dimethyl methanamide	154
Diethylamine	140	Dimethylacetone	147	N,N-Dimethylmethanamide	165
N,N-Diethylamine	140	Dimethyl acetylene	78	N,N-Dimethylmethanamine	423
2-Diethylaminoethanol	145	Dimethylamine	155	Dimethyl methane	353
2-Diethylaminoethyl alcohol	145	Dimethylamino cyclohexane	161	Dimethylnitromethane	324
1.2-Diethylbenzene	141	2-Dimethylaminoethanol	156	2.4-Dimethyl-3-oxa-2.4-disilapentane	398
o-Diethylbenzene	141	1-Dimethyl aminopropane	171	Dimethyl oxide	163
Diethyl carbinol	345	1-Dimethylaminopropan-2-ol	170	2.3-Dimethylpentane	168
Diethylcarbitol	143	Dimethylaminopropylamine	157	N,N-Dimethyl-1-propanamine	172
Diethyl carbonate	142	1.2-Dimethylbenzene	447	N,N-Dimethyl-1.3-propandiamine	157
Diethyldiglycol	143	1.3-Dimethylbenzene	446	2.2-Dimethyl propane	169
Diethylene dioxide	174	1.4-Dimethylbenzene	448	N,N-Dimethyl-1-propane amine	171
Diethylene ether	174	2.2-Dimethylbutane	158	N,N-Dimethyl-i-propanolamine	170
Diethylene glycol diethylether	143	2.3-Dimethylbutane	159	Dimethylpropylamine	172
Diethylene monoxide	394	1.3-Dimethyl butanol	306	N,N-Dimethyl-i-propylamine	171
Diethylene oximide	318	Di-3-methylbutyl ether	117	N,N-Dimethyl-n-propyl amine	172
Diethyleneglycol dimethylether	144	Dimethyl carbinol	354	Dimethylpropylmethane	304
N,N-Diethylethanamine	415	Dimethyl carbitol	144	1.1-Dimethyl propylmethyl ether	30
N,N-Diethylethanolamine	145	Dimethyl carbonate	160	Dimethylsilyl chloride	93
Diethyl ether	146	Dimethylchloroether	95	Dimethyl sulfide	173
Diethyl ketone	147	Dimethylchlorosilane	93	Dioform cis	126
Diethylmethylmethane	305	N,N-Dimethyl cyclohexyl amine	161	Dioform trans	127
Diethyl oxide	146	N,N-Dimethyl-1.3-diaminopropane	157	1.4-Dioxa cyclohexane	174
Diethylsulfide	148	Dimethyl diglycol	144	1.3-Dioxa cyclopentane	175
Diethyl thioether	148	Dimethyl dimethoxy methane	153	2.5-Dioxahexane	151
Difluoro chloroethane	91	Dimethyl disulfide	162	1.4-Dioxane	174
Difluorochloromethane	92	Dimethylenediamine	207	p-Dioxane	174
1.1-Difluoroethane	149	Dimethylene oxide	210	1.3-Dioxolane	175
Difluoromethane	150	N,N-Dimethylethanamine	164	DIPA	176
2-Difluoromethoxy tetrafluoroethane	114	1.1-Dimethylethane	43	Di-i-pentyl ether	117
Diglyme	144	1.1-Dimethyl ethanethiol	76	Diplogen	115
Dihexyl	184	1.1-Dimethylethanol	48	Di-i-propyl	159
Dihydro-1.3-dioxol	175	N,N-Dimethylethanolamine	156	Di-i-propylamine	176
Dihydrogen dioxide	259	Dimethylether	163	Di-n-propylamine	177
Dihydrogen selenide	260	Dimethyl ethinyl carbinol	288	Dipropylamine	177
3.4-Dihydro-2-methoxypyrene	272	Bis(1.1-dimethylethyl)peroxide	121	Dipropylene glycol dimethyl ether	178
1.2-Dihydroxyethane	208	1.1-Dimethylethylamine	66	Dipropylene glycol methyl ether	275
Diisoamyl ether	117	Dimethylethylamine	164	Dipropylene glycol monomethyl ether	275
a-Diisobutylene	429	1.1-Dimethylethyl arsine	68	Di-i-propyl ether	179
Diisopentyl ether	117	Dimethyl ethyl carbinol	25	Di-n-propyl ether	180

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Dipropyl ether	180	Enflurane	185	Ethoxyethene	223
N,N-Dipropyl-1-propanamine	433	EO	210	2-Ethoxyethyl acetate	192
Disilane	181	Epichlorohydrin	186	Acetic acid 2-ethoxyethylester	192
2,3-Dithiabutane	162	1,2-Epoxy-3-allyloxypropane	17	2-Ethoxy-2-methyl propane	200
Divinyl	41	1,4-Epoxy-1,3-butadiene	228	1-Ethoxypropane	222
Divinyl benzene	182	1,2-Epoxybutane	187	1-Ethoxy-2-propanol	193
Divinylene oxide	228	1,4-Epoxybutane	394	1-Ethoxypropan-2-ol	193
Divinyloxyethane	183	3,4-Epoxybut-1-ene	42	4-Ethoxy-1,1,1-trifluoro-3-buten-2-one	194
Divinyloxide	183	1,2-Epoxy cyclohexane	105	Ethoxy trifluoro butenone	194
1,3-Divinyl-1,1,3,3-tetramethyldisilazane	399	1,2-Epoxyethane	210	Ethrane	185
1,3-Divinyltetramethyldisilazane	399	1,2-Epoxy propane	373	Ethyl acetate	195
DMA	155	2,3-Epoxypropylchloride	186	1-Ethyl acetone	309
DMAC	154	EPP	220	Ethyl acrylate	196
DMAPA	157	Erythrene	41	Ethyl alcohol	189
DMC	160	ETBE	200	Ethyl aldehyde	1
DMCHA	161	ETFBO	194	Ethylamine	197
DMCPS	111	Ethanal	1	Ethylbenzene	198
DMCS	93	Ethane	188	Ethylbenzol	198
DMDS	162	Ethane amine	197	Ethylbromide	199
DME	163	Ethancarboxylic acid	359	Ethyl-tert-butylether	200
DMEA	164	1,2-Ethanediamine	207	2-Ethyl caproaldehyde	212
DMF	165	Ethane dichloride	124	2-Ethylcaproic acid	213
DMIPA	171	1,2-Ethanediol	208	Ethyl carbinol	355
DMK	3	Ethane-1,2-diol	208	Ethyl cellosolve	191
DMPA	172	Ethanethiol	218	Ethylchloride	201
DMS	173	Ethanoic acid	2	Ethyl chlorocarbonate	202
DnBA	119	Ethanoic acid ethyl ester	195	Ethyl chloroformate	202
i-Dodecane	342	Ethanoic acid methyl ester	277	Ethyl chloromethanoate	202
n-Dodecane	184	Ethanoic acid propyl ester	365	Ethylcyclobutane	203
DPDME	178	Ethanol	189	Ethylcyclohexane	204
DPGME	275	Ethanol amine	190	Ethylcyclopentane	205
DS	181	Ethanoyl chloride	7	Ethylcyclohexane	205
DTBP	121	Ethene	206	Ethylcyclohexane	204
DVB	182	Ethenyl acetate	436	Ethylcyclopentane	205
DVE	183	Ethenyl benzene	384	Ethylcyclohexane	204
DVTMDS	399	Ethenylcyclohexane	439	Ethylcyclohexane	204
ECH	186	4-Ethenyl-1-cyclohexene	440	Ethylcyclopentane	205
EDA	207	Ethenyl ethanoate	436	Ethylcyclohexane	204
EDC	124	1-Ethenyl-3-methylbenzene	315	Ethylcyclohexane	204
EGBE	54	1-Ethenyl-4-methylbenzene	316	Ethylcyclopentane	205
EGBEA	55	Ethenyl methylether	442	Ethylcyclohexane	204
EGDME	151	Ethenyl oxirane	42	Ethylcyclopentane	205
EGEE	191	Ethenyloxyethene	183	Ethylcyclohexane	204
EGEEA	192	2-Ethenylpyridine	444	Ethylcyclopentane	205
EGiPE	362	Ethenyltrimethoxysilane	445	Ethylcyclohexane	204
EGME	273	Ethine	8	Ethylcyclopentane	205
EGnPE	361	Ethynyl dimethyl carbinol	288	Ethylcyclohexane	204
2-EHA	213	Ethoxycarbonyl chloride	202	Ethylcyclopentane	205
EMA	219	Ethoxy ethane	146	Ethylcyclohexane	204
EMC	292	2-Ethoxyethanol	191	Ethylcyclopentane	205
ENB	216	2-Ethoxyethanol acetate	192	Ethylcyclohexane	204

Substance	No.	Substance	No.	Substance	No.
Ethylene imine	209	Ethylpropionate	221	Germanium tetrafluoride	233
Ethylene oxide	210	Ethylpropylether	222	Germanium tetrahydride	231
Ethylene tetrachloride	387	Ethylpropylketone	248	Germanomethane	231
Ethylene trichloride	409	Ethyl silicate	388	Glyceryl trichlorohydrin	412
N-Ethylethane amine	140	Ethyl sulphydrate	218	Glycidyl allyl ether	17
Ethyl ethanoate	195	Ethyl vinyl ether	223	Glycol	208
Ethyl ether	146	Ethyne	8	Glycol chlorohydrin	94
Ethylethylene	50	Ethynyl carbinol	356	Glycol dimethylether	151
Ethyl formate	211	EtM	218	Glycol monobutyl ether acetate	55
Ethylformic acid	359	EtOH	189	Glycol monomethyl ether	273
Ethyl glycol	191	EVE	223	HF-A	257
Ethyl glycol acetate	192	Fluorine	224	Halon 10001	300
2-Ethylhexaldehyde	212	Fluorobenzene	225	Halon 2311	234
Ethylhexamethylene	204	Fluoroethene	441	Halothane	234
2-Ethyl-1-hexanal	212	Fluoroethylene	441	HCFC 141b	128
2-Ethylhexanal	212	Fluoroform	417	HCFC 142b	91
2-Ethyl-1-hexanamine	215	Fluoromethane	297	HCFC 22	92
2-Ethylhexanoic acid	213	Fluoromethyl hexafluoro-2-propyl ether	380	Heavy Hydrogen	115
2-Ethylhexoic acid	213	Fluothrane	234	Hendecane	435
Acrylic acid (2-ethylhexyl)ester	214	Forane	262	1.1.1.2.3.3.3-Heptafluoropropane	235
2-Ethylhexyl acrylate	214	Formal	152	2H-Heptafluoropropane	235
2-Ethyl-1-hexylamine	215	Formal	152	Heptafluoropropane	235
2-Ethylhexylamine	215	Formaldehyde	226	1.1.1.3.5.5.5-Heptamethyltrisiloxane	236
2-Ethylhexyl-2-propenoate	214	Formaldehyde dimethylacetal	152	Heptamethyl trisiloxane	236
Ethylic acid	2	Formaldehyde ethylene acetal	175	i-Heptane	168
5-Ethylidenebicyclo(2.2.1)hept-2-ene	216	Formic acid	227	n-Heptane	237
Ethylidene chloride	123	Formic acid butyl ester	74	3-Heptane carboxylic acid	213
Ethylidene diethyl ether	138	Formic acid dimethylamide	165	1-Heptanol	238
Ethylidene fluoride	149	Formic acid ethyl ester	211	Heptan-1-ol	238
5-Ethylidene-2-norbornene	216	Formic acid methyl ester	298	2-Heptanone	239
Ethylidene norbornene	216	Formic acid propylester	374	Heptan-2-one	239
5-Ethylidene-8.9.10-trinorborn-2-ene	216	Formic acid-o-triethyl ester	414	1-Heptene	240
Ethyl lactate	217	Formic acid-o-trimethyl ester	420	Hept-1-ene	240
Ethyl mercaptan	218	Formonitrile	256	Heptyl alcohol	238
Ethyl methacrylate	219	4-Formyl-1-cyclohexene	393	1-Heptylene	240
Ethyl methanoate	211	N-Formyldimethylamine	165	Hexafluoro-2-(fluoromethoxy)propane	380
Ethyl methyl acrylate	219	Fural	229	Hexafluoro-1.3-butadiene	241
Ethyl methyl carbonate	292	2-Furaldehyde	229	Hexafluoroethane	242
Ethylmethyl ether	293	Furan	228	Hexahydroaniline	106
4-Ethyl-2-methylhexane	294	2-Furancarbinol	230	Hexahydrobenzene	101
Ethyl methyl ketone	295	2-Furancarboxyaldehyde	229	Hexahydro-N,N-dimethyl aniline	161
Ethyl-2-methyl-2-propenoate	219	Furfural	229	Hexahydrophenol	102
Ethyl nitrile	4	Furfur alcohol	230	Hexahydropyridine	352
Ethyl orthosilicate	388	Furfuraldehyde	229	Hexahydrotoluene	291
Ethyl oxirane	187	Furfuran	228	Hexalin	102
Ethylpentamethylene	205	Furfuryl alcohol	230	Hexamethyldisilazane	243
1-Ethylpiperidine	220	2-Furylmethanal	229	Hexamethyldisiloxane	244
N-Ethylpiperidine	220	2-Furylmethanol	230	Hexamethylene	101
Ethyl propanoate	221	Germane	231	1-Hexanamine	251
1-Ethyl-1-propanol	345	Germanium hydride	231	Hexanaphthene	101
Ethyl propanoate	196	Germanium tetrachloride	232	Hexanaphthylene	104

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Substance	No.	Substance	No.	Substance	No.
i-Hexane	304	1-Hydroxy-2-butylamine	19	Isoheptane	168
i-Hexane	305	Hydroxycyclohexane	102	Isohexane	305
n-Hexane	245	2-Hydroxyethanol	208	Isohexane	304
1-Hexanol	246	2-Hydroxyethylamine	190	Isononane	401
Hexan-1-ol	246	Propanoic acid 2-hydroxy ethylester	217	Isononane	294
2-Hexanone	247	1-Hydroxyheptane	238	Isononane	427
3-Hexanone	248	1-Hydroxyhexane	246	Isooctane	428
Hexan-2-one	247	4-Hydroxy-2-keto-4-methylpentane	116	Isooctane	166
Hexan-3-one	248	2-Hydroxymethylfuran	230	Isooctylamine	215
Hexanone	103	4-Hydroxy-4-methyl-2-pentanone	116	Isopentane	283
Hex-2-en	250	3-Hydroxypropene	13	Isopentanoic acid	284
1-Hexene	249	Hydroxypropionic acid ethyl ester	217	Isopentanol	285
2-Hexene	250	2-Hydroxy triethylamine	145	Isopentanol	23
Hex-1-ene	249	Hydroxytrimethylsilane	431	Isopentyl acetate	21
Hexone	287	IBA	46	Isopentyl alcohol	23
Hexyl alcohol	246	i-Butyric acid i-butylester	69	Isopentylchloride	27
n-Hexylamine	251	iC12	342	Isopentyl ether	117
Hexylene	249	iC4=	52	Isopentyl formate	29
Hexyl hydride	245	Iodomethane	300	Isopentyl methyl ketone	281
HFC-1234ze	392	IPA	354	Isoprene	263
HFC 365mfc	339	IPC	369	Isopropanol	354
HFO-1234yf	391	iPM	375	Isopropenyl acetate	357
HFO-1234ze	392	Isoamyl acetate	21	Isopropenyl benzene	317
HMDS	243	Isoamyl alcohol	23	Isopropenyl chloride	96
HMDSO	244	Isoamylchloride	27	4-Isopropenyl-1-methyl cyclohexene	265
Hydralin	102	Isoamyl ether	117	Isopropoxyethanol	362
Hydrazine	252	Isoamyl formate	29	2-Isopropoxy propane	179
Hydrobromic acid	254	Isoamyl hydride	283	Isopropyl acetate	364
Hydrochloric acid	255	Isoamyl methyl ketone	281	Isopropyl acetone	287
Hydrocyanic acid	256	Isobutanal	79	Isopropyl alcohol	354
Hydrofluoric acid	257	Isobutane	43	Isopropylamine	366
Hydrogen	253	Isobutanol	46	Isopropyl benzene	99
Hydrogen arsenide	34	Isobutene	52	Isopropyl carbinol	46
Hydrogen bromide	254	Isobutenyl methyl ketone	266	Isopropyl chloride	369
Hydrogen carboxylic acid	227	Isobutyl acetate	58	Isopropyl ether	179
Hydrogen chloride	255	Isobutyl acrylate	61	Isopropyl glycol	362
Hydrogen cyanide	256	Isobutyl alcohol	46	Isopropylidene acetone	266
Hydrogen dioxide	259	Isobutyl amine	63	Isopropyl mercaptan	375
Hydrogen fluoride	257	Isobutyl carbinol	23	Isopropyl methylketone	310
Hydrogen iodide	258	Isobutyl chloride	70	Isopropyl nitrate	377
Hydrogen nitrate	319	Isobutylene	52	Isopropyl oxitol	362
Hydrogen peroxide	259	Isobutyl ethanoate	58	Isovaleric acid	284
Hydrogen phosphide	348	Isobutyl formate	73	Ketocyclopentane	108
Hydrogen selenide	260	Isobutyl isobutyrate	69	Ketohexamethylene	103
Hydrogen sulfide	261	Isobutyl methylketone	287	Keto pentamethylene	108
Hydroiodic acid anhydrous	258	Isobutyl-2-methyl propanoate	69	Ketopropane	3
Hydroperoxide	259	Isobutyraldehyde	79	Lactic acid ethyl ester	217
Hydrosulfuric acid	261	Isobutyric acid isobutyl ester	69	Lead tetraethyl	264
1-Hydroxy-2-aminobutane	19	Isobutyric aldehyde	79	(R)-(+)-Limonene	265
1-Hydroxybutane	47	Isododecane	342	D-Limonene	265
2-Hydroxybutane	45	Isoflurane	262	MA	280

Substance	No.	Substance	No.	Substance	No.
MAK	239	2-Methoxy-2-methyl butane	30	Methyl-i-butylketone	287
MBK	247	Methoxy methylchloride	95	2-Methyl-3-butyn-2-ol	288
MCB	88	(2-Methoxymethylethoxy)-1-propanol	275	3-Methyl butynol	288
MCH	291	(2-Methoxymethylethoxy)propanol	275	3-Methylbutyric acid	284
MDHP	272	2-Methoxy-1-methylethyl acetate	276	Methylcarbinol	189
Mel	300	2-Methoxy-2-methyl propane	286	Methyl cellosolve	273
MEK	295	1-Methoxypropane	308	Methyl chloride	289
MeM	301	1-Methoxy-2-propanol	274	Methyl chlorocarbonate	290
p-Mentha-1.8-diene	265	Methoxy propoxy propanol	275	Methyl chloroform	408
4-Menth-1-ene-8-ol	386	1-Methoxy-2-propyl acetate	276	Methyl chloroformate	290
MeOH	269	Methylacetaldehyde	358	Methyl chloromethanoate	290
1-Mercaptobutane	75	Methyl acetate	277	Methylchloromethyl ether	95
Mercaptoethane	218	Methylacetic acid	359	Methyl cyanide	4
Mercaptomethane	301	Methylacetic anhydride	360	Methylcyclohexane	291
1-Mercaptopropane	376	Methyl acetone	295	2(4-Methylcyclohex-3-ene-1-yl)propan-2-ol	386
Mesitylene	425	Methyl acetylene	378	Methyl diethoxy silane	139
Mesityl oxide	266	Methyl acrylate	278	Methyl dipropylene glycol	275
Metaformaldehyde	432	a-Methylacrylic acid	267	Methylene acetone	443
Methacetone	147	Methylal	152	Methylene chloride	129
Methacrylic acid	267	Methyl alcohol	269	Methylene dichloride	129
Methacrylic acid allyl ester	18	Methyl aldehyde	226	Methylene fluoride	150
Methacrylic acid butylester	77	Methylallene	40	Methylene glycol dimethyl ether	152
Methacrylic acid ethylester	219	2-Methylallyl chloride	279	Methylene oxide	226
Methacrylic acid methyl ester	302	Methylallylchloride	279	4.7-Methylentetrahydro indene	137
Methallyl chloride	279	Methylamine	280	Methyl ethanoate	277
Methanal	226	4-Methyl-2-amyl alcohol	306	Methylethene	371
Methane	268	Methyl-tert-amylether	30	(1-Methyl ethenyl)benzene	317
Methanecarbonitrile	4	Methyl amyl ketone	239	Methyl ether	163
Methanecarboxylic acid	2	Methyl-i-amyl ketone	281	2-Methyl-2-ethoxy propane	200
Methanethiol	301	Methyl benzene	406	Methyl ethyl carbinol	45
Methane trichloride	410	Methyl benzol	406	Methyl ethyl carbonate	292
Methanoic acid	227	Methylbis(trimethylsiloxy)silane	236	Methylethylene	371
Methanoic acid ethyl ester	211	Methyl bromide	282	Methyl ethylene oxide	373
Methanoic acid methyl ester	298	2-Methyl-1.3-butadiene	263	Acetic acid 1-methylethyl ester	364
Methanoic acid propylester	374	1-Methylbutadiene trans	338	Nitric acid 1-methylethylester	377
Methanol	269	2-Methylbutane	283	Methylethyl ether	293
1-Methoxy-2-acetoxypropane	276	3-Methylbutanoic acid	284	2-Methyl-4-ethylhexane	294
Methoxybenzene	32	2-Methyl-1-butanol	285	Methyl ethyl ketone	295
3-Methoxy-1-butanol	270	2-Methylbutan-2-ol	25	Methylethylmethane	44
3-Methoxybutanol	270	3-Methylbutan-1-ol	23	1-Methylethyl-2-propanamine	176
Methoxycarbonyl chloride	290	3-Methyl butan-2-one	310	Methylethyl sulfide	296
Methoxycarbonylethylene	278	3-Methyl-2-butanone	310	Methylfluoride	297
p-Methoxy cyclohexanone	271	Methyl-i-butenyl ketone	266	Methylfluoroform	416
4-Methoxy cylohexanone	271	3-Methyl butyl acetate	21	Methyl formate	298
2-Methoxy-3.4-dihydropyran	272	2-Methyl butylacrylate	77	Methyl glycol	273
Methoxy dihydropyran	272	2-Methyl butyl alcohol	285	2-Methyl-5-hexanone	281
Methoxy ethane	293	Methyl-i-butyl carbinol	306	5-Methyl-2-hexanone	281
2-Methoxyethanol	273	Methyl-i-butylene ketone	266	Methyl hydrazine	299
Methoxyethene	442	Methyl-tert-butyl ether	286	Methyl hydride	268
1-Methoxy-2-hydroxypropane	274	3-Methyl-1-butylformate	29	Methylhydrogen diethoxy silane	139
Methoxy methane	163	Methyl butyl ketone	247	Methyl iodide	300

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Substance	No.	Substance	No.	Substance	No.
Methyl isobutyl carbinol	306	Methylpropionate	307	Monobutyl glycol ether	54
Methyl isobutyl ketone	287	2-Methyl-2-propionic acid-2-propenyl ester	18	Monochloroacetaldehyde	87
1-Methyl-4-isopropenyl-1-cyclohexene	265	1-Methylpropyl acetate	57	Monochlorobenzene	88
1-Methyl-4-isopropyl-1-cyclohexene-8-ol	386	2-Methylpropyl acetate	58	Monochloroethane	201
Methyl mercaptan	301	2-Methyl propyl acrylate	61	Monochloromethane	289
Methyl methacrylate	302	1-Methyl propylamine	65	Monoethylamine	197
N-Methylmethanamine	155	2-Methylpropyl amine	63	Monoethyl glycol ether	191
Methylmethane	188	2-Methyl-i-propyl arsine	68	Monofluorobenzene	225
Methyl methanoate	298	2-Methylpropyl-i-butyrate	69	Monoglyme	151
2-Methyl-2-methoxybutane	30	2-Methylpropyl chloride	70	Monomethylamine	280
2-Methyl-2-methoxy propane	286	1-Methyl propylene glycol-2	274	Monomethyl glycol ether	273
Methyl-2-methyl-2-propenoate	302	Methyl-n-propylether	308	Monomethylhydrazine	299
4-Methyl morpholine	303	Methylpropylether	308	Monomethylsilane	314
N-Methyl morpholine	303	2-Methylpropyl formate	73	Monosilane	381
4-Methyl-3-oxa-1-pentanol	362	Methyl propyl ketone	309	Morpholine	318
Methyloxirane	373	Methyl-i-propyl ketone	310	MPK	309
Methyl oxitol	273	2-Methylpyridine	311	MTBE	286
2-Methyl pentane	304	3-Methylpyridine	312	Muriatic acid	255
3-Methyl pentane	305	1-Methyl-2-pyrrolidinone	313	MVK	443
4-Methyl-2-pentanol	306	1-Methyl-2-pyrrolidone	313	cis-Naphthane	110
4-Methylpentan-2-ol	306	N-Methyl-2-pyrrolidone	313	Naphthene	101
2-Methyl-2-pentanol-4-one	116	N-Methylpyrrolidone	313	NBA	47
4-Methyl-2-pentanone	287	Methylsilane	314	NBC	71
4-Methyl-3-penten-2-one	266	2-Methyl-2-silapropane	430	NBM	75
4-Methylpent-3-en-2-one	266	3-Methylstyrene	315	Neohexane	158
4-Methyl-2-pentyl alcohol	306	4-Methylstyrene	316	Neopentane	169
Methyl-tert-pentylether	30	a-Methyl styrene	317	Nitric acid	319
Methyl pentyl ketone	239	m-Methylstyrene	315	Nitric oxide	322
Methyl phenyl ether	32	p-Methylstyrene	316	Nitrobenzene	320
1-Methyl-1-phenylethylene	317	Methyl sulfhydrate	301	Nitrobenzol	320
Methylphenylketone	5	Methylthioethane	296	Nitrochloroform	411
2-Methyl propanal	79	Methyl thiomethane	173	Nitrogen dioxide	321
2-Methylpropane	43	1-Methylvinyl acetate	357	Nitrogen monoxide	322
2-Methyl-1-propane amine	63	1-Methyl-3-vinylbenzene	315	Nitrogen peroxide	321
2-Methyl-2-propane amine	66	1-Methyl-4-vinylbenzene	316	Nitrogen tetroxide	321
2-Methyl-2-propanethiol	76	Methylvinyl ether	442	Nitrogen trifluoride	323
2-Methylpropane-2-thiol	76	Methylvinylketone	443	2-Nitropropane	324
Methylpropanoate	307	MFB	225	Nitro-i-propane	324
1-Methyl propanol	45	MiAK	281	Nitrotrichloromethane	411
2-Methyl-1-propanol	46	MiBC	306	NMM	303
2-Methyl-2-propanol	48	MiBK	287	NMP	313
2-Methylpropan-2-ol	48	MIPK	310	i-Nonane	427
Methyl propanone	295	MMA	302	i-Nonane	401
2-Methylprop-1-ene	52	MMH	299	i-Nonane	294
2-Methylpropene	52	MMS	314	n-Nonane	325
Methyl propenoate	278	MO	266	Nonan-5-on	326
2-Methyl-2-propenoic acid	267	MOB	32	5-Nonanone	326
2-Methyl-2-propenoic acid butylester	77	Monoamylamine	26	2.5-Norbornadiene	327
2-Methyl-2-propenoic acid ethylester	219	Monobromoethane	199	Norborna-2.5-diene	327
2-Methyl-2-propenoic acid methyl ester	302	Monobromomethane	282	Norflurane	389
2-Methyl-2-propenyl-2-propenoate	18	Monobutylamine	64	2-NP	324

Substance	No.	Substance	No.	Substance	No.
NPA	355	Pentamethylene imine	352	Phenylethylene	384
nPM	376	2.2.4.6.6-Pentamethylheptane	342	Phenyl fluoride	225
NTO	321	2.4-Pentandione	6	Phenyl hydride	35
1.7-Octadiene	328	i-Pentane	283	Phenyl methane	406
Octa-1.7-diene	328	n-Pentane	343	Phenyl methyl ether	32
Octafluoro cyclobutane	329	tert-Pentane	169	Phenylmethylketone	5
Octafluoro cyclopentene	330	1-Pentane amine	26	1-Phenylpropane	368
Octamethyl cyclotetrasiloxane	331	Pentane-2.4-dione	6	2-Phenyl propane	99
Octamethyl trisiloxane	332	Pentanoic acid	344	2-Phenyl propene	317
i-Octane	428	i-Pentanoic acid	284	Phenyl trifluoromethyl ether	418
i-Octane	166	1-Pentanol	24	Phosgene	347
n-Octane	333	3-Pentanol	345	Phosphine	348
i-Octanoic acid	213	Pentan-1-ol	24	Phosphorus chloride	350
1-Octene	334	Pentan-3-ol	345	Phosphorus chloride	349
i-Octylamine	215	i-Pentanol	285	Phosphorus hydride	348
1-Octylene	334	i-Pentanol	23	Phosphorus oxychloride	349
ODCB	122	n-Pentanol	24	Phosphorus oxytrichloride	349
Olefiant gas	206	tert-Pentanol	25	Phosphorus trichloride	350
OMCTS	331	2-Pentanone	309	Phosphorus trihydride	348
OMTSO	332	3-Pentanone	147	Phosphoryl chloride	349
7-Oxabicyclo(4.1.0)heptane	105	Pentan-2-one	309	2-Picoline	311
Oxacyclopentadiene	228	Pentan-3-one	147	3-Picoline	312
Oxirane	210	1-Pentene	346	Picoline	311
Oxitol	191	i-Pentyl acetate	21	m-Picoline	312
Oxol	228	n-Pentyl acetate	22	o-Picoline	311
Oxomethane	226	n-Pentyl alcohol	24	Pimelic ketone	103
1.1'-Oxybis(2-ethoxy-ethane)	143	Pentylchloride	28	a-Pinene	351
1.1'-Oxybis(2-methoxy-ethane)	144	i-Pentylchloride	27	PIP	352
1.1'-Oxybis(3-methyl-butane)	117	n-Pentylene	346	Piperidine	352
Oxybis(methoxypropane)	178	Formic acid i-pentylester	29	Piperylene	338
1.1'-Oxybisbutane	120	i-Pentyl formate	29	Piperylene trans	338
1.1'-Oxybisethane	146	tert-Pentyl methyl ether	30	PnPGE	363
1.1'-Oxybisethene	183	i-Pentyl methyl ketone	281	PO	373
1.1'-Oxybismethane	163	PER	387	POCL	349
1.1'-Oxybispropane	180	Perchloroethylene	387	Propanal	358
2.2'-Oxybispropane	179	Perfluoro butadiene	241	1-Propanamine	367
Oxygen	335	Perfluoro cyclobutane	329	2-Propanamine	366
Ozone	336	Perfluoro cyclopentene	330	Propane	353
Paracetaldehyde	337	Perfluoroethylene	390	1.2-Propanediamine	372
Paraldehyde	337	Perhydronaphthalene	110	1.2-Propanediol-1-monomethyl ether	274
PCHO	337	PFC	330	1-Propanethiol	376
PDA	372	PFE	390	2-Propanethiol	375
PDC	130	PGBE	56	Propanoic acid	359
(E)-1.3-Penadiene	338	PGEE	193	Propanoic acid anhydride	360
1.3-Pentadiene trans	338	PGME	274	Propanoic acid ethylester	221
Penta-1.3-diene trans	338	PGMEA	276	Propanoic acid methylester	307
1.1.1.3.3-Pentafluoro butane	339	Phenoxy methane	32	Propanoic anhydride	360
Pentafluoroethane	340	Phenylamine	31	1-Propanol	355
1.1.1.3.3-Pentafluoropropane	341	Phenyl chloride	88	2-Propanol	354
Pentafluoropropane	341	Phenylethane	198	Propan-2-ol	354
Pentamethylene	107	1-Phenylethanone	5	i-Propanol	354

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Substance	No.	Substance	No.	Substance	No.
n-Propanol	355	n-Propylbenzene	368	R114	134
2-Propanone	3	Propyl carbinol	47	R1140	438
Propan-2-one	3	i-Propyl carbinol	46	R1141	441
Propargyl alcohol	356	n-Propylcarbinyl chloride	71	R1150	206
2-Propenal	9	Propyl cellosolve	361	R116	242
Propene	371	i-Propyl chloride	369	R123	135
2-Propene-1-amine	14	n-Propylchloride	370	R1234ze	392
2-Propenenitrile	11	Propylene	371	R123B1	234
1,2-Propene oxide	373	Propylene aldehyde	49	R125	340
Propenoic acid	10	Propylene bromide	15	R1270	371
Propenoic acid butyl ester	62	Propylenechloride	16	R134a	389
2-Propenoic acid ethyl ester	196	1,2-Propylenediamine	372	R140a	408
2-Propenoic acid-2-ethylhexyl ester	214	1,2-Propylene dichloride	130	R141b	128
2-Propenoic acid-2-methyl-2-propenyl ester	18	Propylene glycol methylether acetate	276	R142b	91
2-Propenoic acid-2-methylpropyl ester	61	Propylene glycol monobutylether	56	R143a	416
2-Propen-1-ol	13	Propylene glycol monoethyl ether	193	R150	124
1-Propen-2-ol acetate	357	Propylene glycol monomethyl ether	274	R150a	123
Propenyl acetate	12	Propylene glycol propyl ether	363	R152a	149
i-Propenyl acetate	357	Propylene oxide	373	R160	201
Propenyl alcohol	13	2-Propylenglycol-1-ethylether	193	R170	188
2-Propenylamine	14	Acetic acid i-propyl ester	364	R20	410
i-Propenyl benzene	317	Nitric acid i-propylester	377	R22	92
i-Propenyl chloride	96	Ethylene glycol i-propyl ether	362	R227ea	235
Acetic acid i-propenyl ester	357	Propylethylene	346	R23	417
2-Propenyl methanoate	12	Propylethylether	222	R245fa	341
Propine	378	n-Propylformate	374	R270	130
Propionaldehyde	358	Propylglycol	361	R280	370
Propione	147	i-Propyl glycol	362	R290	353
Propionic acid	359	Propyl hydride	353	R30	129
Propionic acid anhydride	360	i-Propylidene acetone	266	R32	150
Propionic acid ethylester	221	1-Propyl mercaptan	376	R365	339
Propionic aldehyde	358	2-Propyl mercaptan	375	R40	289
Propionic anhydride	360	i-Propyl mercaptan	375	R40B1	282
2-Propoxyethanol	361	n-Propyl mercaptan	376	R41	297
i-Propoxyethanol	362	Propyl methyl ketone	309	R50	268
2-Propoxy-1-methyl ethanol	363	i-Propyl methylketone	310	R600	44
1-Propoxypropane	180	i-Propyl nitrate	377	R600a	43
1-Propoxy-2-propanol	363	N-Propyl-1-propane amine	177	R610	146
1-Propoxypropan-2-ol	363	1-Propyne	378	R611	298
2-Propyl acetate	364	Propyne	378	R630	280
i-Propyl acetate	364	2-Propyn-1-ol	356	R631	197
n-Propyl acetate	365	Prop-2-yn-1-ol	356	R 702	253
i-Propyl acetone	287	2-Propynyl alcohol	356	R717	20
i-Propyl alcohol	354	Prussic acid	256	R732	335
n-Propyl alcohol	355	Pseudocumene	424	R744	81
Propyl aldehyde	358	Pyridine	379	R764	385
1-Propylamine	367	2-Pyridylethene	444	RC 270	109
2-Propylamine	366	2-Pyridylethylene	444	RC 318	329
i-Propylamine	366	R10	83	SBA	45
n-Propylamine	367	R1130	127	Selane	260
i-Propyl benzene	99	R1130a	125	Selenium hydride	260

Substance	No.	Substance	No.	Substance	No.
Sevoflurane	380	Tetraethoxysilane	388	Thiocyclopentane	396
Sextone	103	Tetraethyl lead	264	Thioethyl alcohol	218
Silaethane	314	Tetraethyl orthosilicate	388	Thiomethanol	301
Silane	381	Tetraethylplumbane	264	Thionyl chloride	403
Silicane	381	Tetraethyl silicate	388	Thiophane	396
Silicic acid tetraethylester	388	1.1.1.2-Tetrafluoro ethane	389	THT	396
Silicochloroform	413	Tetrafluoro ethene	390	Tin chloride	404
Silico ethane	181	Tetrafluoroethyl difluoromethyl ether	114	Tin tetrachloride	404
Silicon chloroform	413	Tetrafluorogermane	233	Titanic chloride	405
Silicon dichloride	133	2.3.3.3-Tetrafluoro-1-propene	391	Titanium dimethylamide	397
Silicon hexahydride	181	2.3.3.3-Tetrafluoroprop-1-ene	391	Titanium tetrachloride	405
Silicon hydride	381	Tetrafluoropropene	391	Titanium tetrakis(dimethylammonium)	397
Silicon tetrachloride	382	1.3.3.3-Tetrafluoroprop-1-ene trans	392	TMA	423
Silicon tetrafluoride	383	Tetrafluoropropylene	391	TMB	426
Silicon tetrahydride	381	Tetrafluorosilane	383	TMDSO	398
Silyltrichloride	413	1.2.3.6-Tetrahydrobenzaldehyde	393	TMOA	422
Solvenon PnB	56	Tetrahydro benzaldehyde	393	TMOF	420
Stannic chloride	404	1.2.3.4-Tetrahydrobenzene	104	TMOS	421
Styrene	384	Tetrahydrofuran	394	TMS	430
Styrol	384	Tetrahydrogermane	231	TMS	402
Sulfane	261	Tetrahydro-4.7-methanoindene	137	TMS	431
Sulfur dioxide	385	1.2.3.4-Tetrahydronaphthalene	395	Toluene	406
Sulfuretted hydrogen	261	Tetrahydronaphthalene	395	Toluene hexahydride	291
Sulfuric chlorohydrin	97	Tetrahydro-1.4-oxazine	318	Toluol	406
Sulfurous dichloride	403	1.2.5.6-Tetrahydrostyrene	440	o-Tolyl chloride	98
Sulfurous oxide	385	Tetrahydrothiophene	396	Tribromoborane	37
Sulfurous oxychloride	403	Tetrakisdimethylaminotitanium	397	Tributylamine	407
Sulfuryl oxychloride	97	Tetralin	395	Trichloroborane	38
Suprane	114	1.1.3.3-Tetralmethyl-1.3-divinylsilazane	399	1.1.1-Trichloroethane	408
TAME	30	Tetramethyl-3-aza-2.4-disilapentane	243	Trichloro ethene	409
TBA	407	1.1.3.3-Tetramethylsiloxane	398	1.1.2-Trichloroethylene	409
TBA	48	Tetramethyldivinyl silazane	399	Trichloro ethylene	409
TBA _s	68	Tetramethylene	100	Trichlorohydrin	412
tBM	76	Tetramethylene oxide	394	Trichloromethane	410
TCE	409	Tetramethylene oxirane	105	Trichloronitromethane	411
TCS	413	Tetramethylene sulfide	396	Trichlorophosphine	350
TDMAT	397	Tetramethyl ethylene diamine	400	Trichlorophosphine oxide	349
TEA	415	Tetramethyl methane	169	Trichlorophosphorus oxide	349
TEL	264	Tetramethyl-3-oxa-2.4-disilapentane	244	1.2.3-Trichloropropane	412
Telone	132	2.2.3.3-Tetramethylpentane	401	Trichlorosilane	413
TEMED	400	Tetramethylsilane	402	Triethoxymethane	414
TEOF	414	Tetramethyl silicane	402	Triethylamine	415
TEOS	388	TFMB	418	Triethyl orthoformate	414
Terpineol	386	THB	393	Trifluoro amine	323
Tetra	83	THF	394	Trifluoro ammonia	323
Tetrachlorocarbon	83	2-Thiabutane	296	Trifluoroanisene	418
Tetrachloroethene	387	3-Thiapentane	148	1.1.1-Trifluoro-2-bromo-2-chloroethane	234
Tetrachloroethylene	387	2-Thiapropane	173	1.1.1-Trifluoroethane	416
Tetrachlorogermane	232	1.1'-Thiobisethane	148	Trifluoro methane	417
Tetrachloromethane	83	Thiobismethane	173	Trifluoro methoxy benzene	418
Tetrachlorosilane	382	Thiobutyl alcohol	75	Trifluoromethylanilin	419

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Substance	No.	Substance	No.	Substance	No.
Trifluoromethyl benzene amine	419	2.4.6-Trimethyl-1.3.5-trioxane	337	2-Vinylethan-1-ol	53
1.1.1-Trimethoxyethane	422	1.3.5-Trioxacyclohexane	432	Vinylether	183
Trimethoxyethane	422	1.3.5-Trioxane	432	Vinyl ethyl alcohol	53
Trimethoxymethane	420	3.6.9-Trioxa undecane	143	Vinylethylene	41
Trimethoxysilane	421	Trioxymethylene	432	Vinylethylene oxide	42
Trimethoxy silylethene	445	Tri-n-propylamine	433	Vinyl ethyl ether	223
Trimethoxy silylhydride	421	Tripropyl amine	433	Vinyl fluoride	441
Trimethoxy vinylsilane	445	Tungsten hexafluoride	434	Vinylidene chloride	125
Trimethyl-o-acetate	422	UDMH	167	Vinylmethyl ether	442
Trimethylamine	423	n-Undecane	435	Vinylmethylketone	443
1.2.4-Trimethylbenzene	424	Valeric acid	344	2-Vinylpyridine	444
1.3.5-Trimethylbenzene	425	i-Valeric acid	284	Vinylstyrene	182
2.6.6-Trimethylbicyclo(3.1.1)hept-2-ene	351	Valerone	326	3-Vinyltoluene	315
Trimethyl borane	426	VAM	436	4-Vinyltoluene	316
Trimethyl carbinol	48	VCH	440	m-Vinyltoluene	315
Trimethylchloromethane	72	VCM	438	p-Vinyltoluene	316
Trimethylene	109	VDC	125	Vinyltrimethoxysilane	445
2.2.4-Trimethyl hexane	427	VF	441	VME	442
Trimethylhydroxysilane	431	Vinyl acetate	436	VTMOS	445
Trimethylmethane	43	Vinylacetylene	437	m-Xylene	446
Trimethyl orthoacetate	422	Vinyl benzene	384	o-Xylene	447
Trimethyl orthoformate	420	Vinyl carbinol	13	p-Xylene	448
2.2.4-Trimethylpentane	428	Vinyl chloride	438	m-Xylol	446
2.4.4-Trimethyl-1-pentene	429	Vinyl cyanide	11	o-Xylol	447
1.2.3-Trimethylpropane	305	Vinylcyclohexane	439	p-Xylol	448
Trimethyl silane	430	4-Vinylcyclohexene	440		
Trimethylsilanol	431	Vinyl ethanoate	436		

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Sum formula	No.	Sum formula	No.	Sum formula	No.	Sum formula	No.	Sum formula	No.
BBr3	37	C2H4Cl2	124	C3H6O	373	C4H8	100	C5H8	338
BCl3	38	C2H4F2	149	C3H6O2	211	C4H8	50	C5H8O	288
Br2	39	C2H4O	210	C3H6O2	359	C4H8O	53	C5H8O	108
CCl2O	347	C2H4O	1	C3H6O2	277	C4H8O	79	C5H8O2	302
CCl3NO2	411	C2H4O2	298	C3H6O2	175	C4H8O	394	C5H8O2	196
CCl4	83	C2H4O2	2	C3H6O3	432	C4H8O	80	C5H8O2	357
CHClF2	92	C2H5Br	199	C3H6O3	160	C4H8O	223	C5H8O2	6
CHCl3	410	C2H5Cl	201	C3H7Cl	369	C4H8O	187	C5H8O2	12
CHF3	417	C2H5ClO	95	C3H7Cl	370	C4H8O	295	C5H9NO	313
CHN	256	C2H5ClO	94	C3H7N	14	C4H8O2	174	C5H10	107
CH2Cl2	129	C2H5N	209	C3H7NO	165	C4H8O2	195	C5H10	346
CH2F2	150	C2H6	188	C3H7NO2	324	C4H8O2	307	C5H10O	310
CH2O	226	C2H6O	163	C3H7NO3	377	C4H8O2	374	C5H10O	309
CH2O2	227	C2H6O	189	C3H8	353	C4H8O3	292	C5H10O	147
CH3Br	282	C2H6O2	208	C3H8O	355	C4H8S	396	C5H10O2	344
CH3Cl	289	C2H6S	218	C3H8O	293	C4H9Cl	70	C5H10O2	221
CH3F	297	C2H6S	173	C3H8O	354	C4H9Cl	72	C5H10O2	73
CH3I	300	C2H6S2	162	C3H8O2	152	C4H9Cl	71	C5H10O2	284
CH4	268	C2H7ClSi	93	C3H8O2	273	C4H9NO	318	C5H10O2	364
CH4O	269	C2H7N	197	C3H8S	376	C4H9NO	154	C5H10O2	74
CH4S	301	C2H7N	155	C3H8S	375	C4H10	44	C5H10O2	365
CH5N	280	C2H7NO	190	C3H8S	296	C4H10	43	C5H10O3	217
CH6N2	299	C2H8N2	167	C3H9B	426	C4H10O	46	C5H10O3	142
CH6Si	314	C2H8N2	207	C3H9N	367	C4H10O	47	C5H11Cl	27
CO	82	C3HF7	235	C3H9N	366	C4H10O	146	C5H11Cl	28
CO2	81	C3H2ClF5O	185	C3H9N	423	C4H10O	45	C5H11N	352
C2Cl2F4	134	C3H2ClF5O	262	C3H10N2	372	C4H10O	308	C5H11NO	303
C2Cl4	387	C3H2F4	391	C3H10OSi	431	C4H10O	48	C5H12	343
C2F4	390	C3H2F4	392	C3H10O3Si	421	C4H10O2	191	C5H12	283
C2F6	242	C3H2F6O	114	C3H10Si	430	C4H10O2	274	C5H12	169
C2HBrClF3	234	C3H3F5	341	C4F6	241	C4H10O2	151	C5H12O	23
C2HCl2F3	135	C3H3N	11	C4F8	329	C4H10O3	420	C5H12O	24
C2HCl3	409	C3H4	378	C4H3F7O	380	C4H10S	76	C5H12O	25
C2HF6	340	C3H4Cl2	132	C4H4	437	C4H10S	148	C5H12O	285
C2H2	8	C3H4O	9	C4H4O	228	C4H10S	75	C5H12O	222
C2H2Cl2	127	C3H4O	356	C4H5F5	339	C4H11As	68	C5H12O	345
C2H2Cl2	126	C3H4O2	10	C4H6	41	C4H11N	63	C5H12O	286
C2H2Cl2	125	C3H5Br	15	C4H6	78	C4H11N	65	C5H12O2	362
C2H2F4	389	C3H5Cl	16	C4H6	40	C4H11N	164	C5H12O2	361
C2H3Cl	438	C3H5Cl	96	C4H6O	183	C4H11N	64	C5H12O2	270
C2H3ClF2	91	C3H5ClO	186	C4H6O	49	C4H11N	66	C5H12O2	193
C2H3ClO	7	C3H5ClO2	202	C4H6O	443	C4H11N	140	C5H12O2	153
C2H3ClO	87	C3H5Cl3	412	C4H6O	42	C4H11NO	19	C5H12O3	422
C2H3ClO2	290	C3H6	371	C4H6O2	267	C4H11NO	156	C5H12O3Si	445
C2H3Cl2F	128	C3H6	109	C4H6O2	436	C4H12Si	402	C5H13N	172
C2H3Cl3	408	C3H6Cl2	130	C4H6O2	278	C4H14OSi2	398	C5H13N	26
C2H3F	441	C3H6Cl2O	131	C4H7Cl	279	C5F8	330	C5H13N	171
C2H3F3	416	C3H6O	358	C4H7Cl	90	C5H4O2	229	C5H13NO	170
C2H3N	4	C3H6O	442	C4H7ClO	89	C5H5N	379	C5H14N2	157
C2H4	206	C3H6O	3	C4H8	52	C5H6O2	230	C5H14O2Si	139
C2H4Cl2	123	C3H6O	13	C4H8	51	C5H8	263	C6H4Cl2	122

Sum formula	No.	Sum formula	No.	Sum formula	No.	Sum formula	No.	Sum formula	No.
C6H5Cl	88	C6H14O	246	C7H16	237	C8H24O2Si3	332	Cl3P	350
C6H5F	225	C6H14O	30	C7H16	168	C8H24O4Si4	331	Cl4Ge	232
C6H5NO2	320	C6H14O	200	C7H16O	238	C9H10	315	Cl4Si	382
C6H6	35	C6H14O	306	C7H16O2	56	C9H10	316	Cl4Sn	404
C6H7F3O2	194	C6H14O	180	C7H16O3	275	C9H10	317	Cl4Ti	405
C6H7N	311	C6H14O	179	C7H16O3	414	C9H12	368	Cl5Sb	33
C6H7N	31	C6H14O2	138	C7H22O2Si3	236	C9H12	425	D2	115
C6H7N	312	C6H14O2	363	C8H8	384	C9H12	216	F2	224
C6H10	104	C6H14O2	54	C8H8O	5	C9H12	424	F3N	323
C6H10O	103	C6H14O3	144	C8H10	198	C9H12	99	F4Ge	233
C6H10O	266	C6H15N	415	C8H10	448	C9H18O	326	F4Si	383
C6H10O	105	C6H15N	251	C8H10	447	C9H20	325	F6W	434
C6H10O2	17	C6H15N	177	C8H10	446	C9H20	427	HBr	254
C6H10O2	272	C6H15N	176	C8H12	440	C9H20	401	HCl	255
C6H10O2	219	C6H15NO	145	C8H14	328	C9H20	294	HClO3S	97
C6H10O3	360	C6H16N2	400	C8H14	439	C9H21N	433	HCl3Si	413
C6H12	249	C6H18OSi2	244	C8H14O2	77	C10H10	182	HF	257
C6H12	101	C6H19NSi2	243	C8H16	204	C10H12	137	HI	258
C6H12	203	C7H5F3O	418	C8H16	334	C10H12	395	HNO3	319
C6H12	250	C7H6F3N	419	C8H16	429	C10H14	141	H2	253
C6H12O	247	C7H7Cl	98	C8H16O	212	C10H16	351	H2Cl2Si	133
C6H12O	248	C7H7Cl	36	C8H16O2	213	C10H16	265	H2O2	259
C6H12O	102	C7H7N	444	C8H16O2	69	C10H18	110	H2S	261
C6H12O	287	C7H8	406	C8H16O3	55	C10H18O	386	H2Se	260
C6H12O2	57	C7H8	327	C8H17N	161	C10H20	113	H3As	34
C6H12O2	29	C7H8O	32	C8H18	166	C10H22	112	H3N	20
C6H12O2	116	C7H10O	393	C8H18	333	C10H22O	117	H3P	348
C6H12O2	59	C7H10O2	18	C8H18	428	C10H30O5Si5	111	H4Ge	231
C6H12O2	60	C7H12O2	62	C8H18O	120	C11H20O2	214	H4N2	252
C6H12O2	58	C7H12O2	271	C8H18O2	121	C11H24	435	H4Si	381
C6H12O3	337	C7H12O2	61	C8H18O3	143	C12H22	136	H6B2	118
C6H12O3	276	C7H14	240	C8H18O3	178	C12H26	342	H6Si2	181
C6H12O3	192	C7H14	205	C8H19N	215	C12H26	184	NO	322
C6H13N	106	C7H14	291	C8H19N	119	C12H27N	407	NO2	321
C6H14	245	C7H14O	281	C8H19NSi2	399	ClF3	86	O2	335
C6H14	304	C7H14O	239	C8H20O4Si	388	ClO2	85	O2S	385
C6H14	305	C7H14O2	21	C8H20Pb	264	Cl2	84	O3	336
C6H14	158	C7H14O2	22	C8H22N2Si	67	Cl2OS	403		
C6H14	159	C7H15N	220	C8H24N4Ti	397	Cl3OP	349		

Product overview

TRANSMITTERS WITH ELECTROCHEMICAL SENSORS FOR THE DETECTION OF TOXIC GASES AND OXYGEN

Dräger Polytron 7000
Intrinsically safe universal transmitter for continuous monitoring of toxic gases and oxygen by means of an electrochemical sensor.



ST-3812-2003

Dräger Polytron 7000 with pump
Universal transmitter for continuous monitoring of toxic gases and oxygen with an integrated pump module.



ST-318-2003

Dräger Polytron 7000 with relay
Universal transmitter for continuous monitoring of toxic gases and oxygen with an integrated relay module.



ST-3814-2003

Dräger Polytron 3000 with display
Intrinsically safe low-cost transmitter for continuous monitoring of toxic gases and oxygen.



ST-3811-2003

Dräger Polytron 3000 without display
Intrinsically safe low-cost transmitter for continuous monitoring of toxic gases and oxygen.



ST-3811-2003

Dräger Polytron 8000
Explosion-proof transmitter with electrochemical DrägerSensor for toxic gases and vapours with analogue and digital signal output, display and optional relays.



D-52604-2012

Dräger Polytron 5100
Explosion-proof 4-20-mA-transmitter for toxic gases and vapours with display and electrochemical DrägerSensor.



D-12415-2014

Dräger Polytron 2000
Transmitter with pre-calibrated DrägerSensor MEC for continuous monitoring of toxic gases and oxygen for non-explosion proof areas.



D-86378-2013

TRANSMITTERS WITH PYROLYSIS MEASURING PRINCIPLE FOR THE DETECTION OF TOXIC GASES AND VAPOURS

Dräger Polytron 7500
Universal fixed gas detector with integrated sampling pump and pyrolysis oven for continuous monitoring of fluorinated and chlorinated gases and NF_3 .



ST-3804-2005

TRANSMITTERS WITH IR-SENSORS FOR THE DETECTION OF FLAMMABLE GASES AND VAPOURS

Dräger PIR 7000

Explosion-proof infrared optical transmitter for the detection of flammable gases and vapours offering virtually drift-free optics and SS 316L stainless steel enclosure.



ST-11659-2007

Dräger PIR 3000

Explosion-proof infrared optical transmitter for the detection of flammable gases and vapours in standard applications.



ST-7766-2005

Dräger Polytron 8700

Explosion-proof transmitter with Dräger PIR 7000 for flammable gases and vapours. With analogue and digital signal output, display and optional relays.



D-14893-2010

Dräger Polytron 5700

Explosion-proof 4-20-mA-transmitter for flammable gases and vapours with display and Dräger PIR 7000.



D-32409-2011

Dräger Polytron 8310

Explosion-proof transmitter with DrägerSensor IR for flammable gases and vapours. With analogue and digital signal output, display and optional relays.



D-15018-2010

Dräger Polytron 5310

Explosion-proof 4-20-mA-transmitter for flammable gases and vapours with display and DrägerSensor IR.



D-32406-2011

TRANSMITTERS WITH IR-SENSORS FOR THE DETECTION OF TOXIC GASES

Dräger PIR 7200

Explosion-proof infrared optical transmitter for monitoring of carbon dioxide, suitable for industrial environments.



ST-11660-2007

Dräger Polytron 8720

Explosion-proof transmitter with Dräger PIR 7200 for carbon dioxide. With analogue and digital signal output, display and optional relays.



D-46491-2012

Dräger Polytron 5720

Explosion-proof 4-20-mA-transmitter for carbon dioxide with display and Dräger PIR 7200.



D-39664-2011

Product overview

TRANSMITTERS AND SENSING HEADS WITH CATALYTIC BEAD SENSORS

Dräger PEX 3000

Family of low-cost 4-20-mA-transmitters with DrägerSensor Ex PR M DD or LC M, with internal display and control elements.



D-11160-2011

Dräger Polytron SE Ex PR M1 DD

Sensing head with DrägerSensor Ex PR M DD and measuring range 0 to 100 %LEL.



D-13899-2010

Dräger Polytron SE Ex LC M1 DD

Sensing head with DrägerSensor Ex LC M for flammable gases with concentrations lower than 10 %LEL.



D-13896-2010

Dräger Polytron SE Ex HT M DD

Sensing head with DrägerSensor Ex HT M DD and metal enclosure for ambient temperatures up to 150 °C.



D-13899-2010

Dräger Polytron 8200

Explosion-proof transmitter with DrägerSensor Ex PR NPT DD or Ex LC NPT for flammable gases and vapours. With analogue and digital signal output, display and optional relays.



D-15042-2010

Dräger Polytron 5200

Low-cost explosion-proof 4-20-mA-transmitter for flammable gases with display and DrägerSensor Ex PR NPT DD or Ex LC NPT.



D-32407-2011

ELECTROCHEMICAL, INFRARED-OPTICAL AND CATALYTIC BEAD SENSORS

DrägerSensor (elch)

Electrochemical gas sensor for toxic gases and oxygen, with integrated data memory.



ST-3829-2003

DrägerSensor AC

Electrochemical gas sensor for the leak-detection of corrosive gases.



ST-3806-2003

DrägerSensor IR

Infrared optical sensor with semi-bridge interface and mV-signal for the detection of flammable gases.



ST-7767-2005

DrägerSensor Ex PR M DD

Catalytic bead sensor (pellistor sensor) for the detection of flammable gas concentrations by way of catalytic reaction ranging up to 100 %LEL.



D-1120-2010

DrägerSensor Ex LC M

Catalytic bead sensor with integrated electronics for the detection of flammable gas concentrations ranging up to 10 %LEL.



ST-7770-2005

TRANSMITTERS WITH OPEN PATH FOR THE DETECTION OF SELECTED GASES AND VAPORS

Dräger Polytron Pulsar
Dräger Polytron Pulsar
OpenPath system for gas
clouds along a line-of-sight of
4 to 200 metres. Robust by
stainless steel housing.



ST-981-2001

Dräger Polytron Pulsar 2
Open path system for the
detection of gas clouds along
a sight line of 4 to 200 meters
between receiver and
transmitter.



D-86923-2013

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
1	Acetaldehyde CAS 75-07-0 CH ₃ CHO	Aald C ₂ H ₄ O	Ethyl aldehyde Ethanal Acetic aldehyde	44.1 1.52 r 141 v	0.78	21 70 °F	1006	<-20 <-4 °F	4.0 (74)	4.0 (74)	4.0 (74)	4.0 (74)	4.0 (74)	155 IIA T4
2	Acetic acid CAS 64-19-7 CH ₃ COOH	C ₂ H ₄ O ₂	Ethanoic acid Methanecarboxylic acid Ethylic acid	60.1 2.07 r	1.05	118 244 °F	16	39 102 °F	6.0 (150)	4.0 (100)	4.0 (100)	4.0 (100)	4.0 (100)	485 IIA T1
3	Acetone CAS 67-64-1 CH ₃ COCH ₃	DMK C ₃ H ₆ O	Dimethyl ketone Propan-2-one 2-Propanone Ketopropane	58.1 2.01 r 115 v	0.79	56 133 °F	246	<-20 <-4 °F	2.5 (61)	2.5 (61)	2.5 (61)	2.5 (61)	2.5 (61)	535 IIA T1
4	Acetonitrile CAS 75-05-8 CH ₃ CN	AN C ₂ H ₃ N	Methyl cyanide Ethyl nitrile Cyanomethane Methanecarbonitrile	41.1 1.42 r 99 v	0.78	82 180 °F	94	2 36 °F	3.0 (51)	3.0 (51)	3.0 (51)	3.0 (51)	3.0 (51)	525 IIA T1
5	Acetophenone CAS 98-86-2 C ₆ H ₅ COCH ₃	C ₈ H ₈ O	Acetyl benzene Methylphenylketone 1-Phenylethanone Phenylmethylketone	120.2 4.15 r	1.03	202 396 °F	0.4	77 171 °F	1.1 (55)			1.1 (55)		535 IIA T1
6	Acetyl acetone CAS 123-54-6 CH ₃ COCH ₂ COCH ₃	C ₆ H ₈ O ₂	2,4-Pentandione Pentane-2,4-dione Diacylmethane Aetyl-2-propanone	100.1 3.46 r	0.98	140 284 °F	9	34 93 °F	1.7 (71)	1.7 (71)			1.7 (71)	340 IIA T2
7	Acetylchloride CAS 75-36-5 CH ₃ COCl	C ₂ H ₃ ClO	Acetic acid chloride Ethanoyl chloride	78.5 2.71 r 325 v	1.10	51 124 °F	309	-4 25 °F	7.3 (239)	5.0 (164)		5.0 (164)	5.0 (164)	390 IIA T2
8	Acetylene CAS 74-86-2 C ₂ H ₂	C ₂ H ₂	Ethine Ethyne	26.0 0.90 r	Gas	-84 -119 °F	Gas	Gas	2.3 (25)	2.3 (25)	2.5 (27)	2.5 (27)	2.3 (25)	305 IIC T2
9	Acrolein CAS 107-02-8 CH ₂ =CHCHO	C ₃ H ₄ O	Acrylic aldehyde 2-Propenal Allyl aldehyde	56.1 1.94 r 117 v	0.84	52 126 °F	295	<-20 <-4 °F	2.8 (65)	2.8 (65)	2.8 (65)	2.8 (65)	2.85 (67)	215 IIB T3
10	Acrylic acid CAS 79-10-7 CH ₂ =CHCOOH	C ₃ H ₄ O ₂	Propenoic acid Acroleic acid Ethylencarboxylic acid	72.1 2.49 r	1.05	141 286 °F	4.3	55 131 °F	2.4 (72)	2.4 (72)	2.4 (72)	2.4 (72)	2.9 (87)	395 IIB T2
11	Acrylonitrile CAS 107-13-1 CH ₂ =CHCN	ACN C ₃ H ₃ N	Vinyl cyanide Ethylene cyanide 2-Propenenitrile Cyanoethylene	53.1 1.83 r 116 v	0.80	77 171 °F	117	-5 23 °F	2.8 (62)	2.8 (62)	3.0 (66)	3.0 (66)	2.8 (62)	480 IIB T1

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
1	50 (92)	200 (368)	CT IR IR IR IR EC	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 P 5700 type 334 PIR 7000 type 340, P 8700 type 340 P 5700 type 340 PIR 3000, P 5310, P 8310 Polytron 7000 and 8000 OV1	10 // 100 %LEL 40 / 100 %LEL // 16000 ppm Gas-Library 50 + 100 %LEL Gas-Library 25 / 100 %LEL // 10000 ppm Gas-Library 50 + 100 %LEL Gas-Library 100 %LEL Aald: 50 / 100 / 200 ppm / LDL = 10 ppm	S = 0.3
2	10 (25)	10 (25)	CT EC	P 5200, P 8200, PEX 3000, SE Ex Polytron 7000 and 8000 AC	10 // 100 %LEL Acid: 3 / 10 / 30 ppm / LDL = 0.5 ppm	Polytron 8200 performance approved
3	500 (1210)	1000 (2421)	CT IR IR IR IR IR OP	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 P 5700 type 334 PIR 7000 type 340, P 8700 type 340 P 5700 type 340 PIR 3000, P 5310, P 8310 Polytron Pulsar 2	10 // 100 %LEL 30 / 100 %LEL // 7500 ppm Gas-Library 50 + 100 %LEL Gas-Library 35 / 100 %LEL // 8750 ppm Gas-Library 50 + 100 %LEL Gas-Library 100 %LEL 1 // 4 / 8 LELm	SE Ex / PEX 3000 / P 8200 performance approved PIR 7000 / P 8700 performance approved PIR 7000 / P 8700 performance approved PIR 3000 / P 8310 performance approved CSF = 0.58 (Propane = 1.00) / LEL = 2.5
4	20 (34)	40 (69)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
5			IR IR	PIR 7000 type 334, P 8700 type 334 P 5700 type 334	55 / 100 %LEL 100 %LEL	
6	30 (125)		CT IR IR IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 P 5700 type 334 PIR 7000 type 340, P 8700 type 340 P 5700 type 340	100 %LEL 100 %LEL (\$) 100 %LEL (\$) 100 %LEL (?) 100 %LEL (?)	
7			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
8		2500c (2708)	CT EC	P 5200, P 8200, PEX 3000, SE Ex Polytron 7000 and 8000 OV1	10 // 100 %LEL C2H2: 20 / 50 / 100 ppm / LDL = 5 ppm	SE Ex / PEX 3000 / P 8200 performance approved S = 1.1
9	0.09 (0.21)	0.1 (0.23)	CT IR IR IR IR EC	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 P 5700 type 334 PIR 7000 type 340, P 8700 type 340 P 5700 type 340 Polytron 7000 and 8000 OV1	10 // 100 %LEL 55 / 100 %LEL 100 %LEL 75 / 100 %LEL (&) 100 %LEL (&) as MeOH (20 / 50 / 200 ppm)	polymerizing/sensor poison S = 1.3 (L)
10	10 (30)	2 (6.0)	CT EC	P 5200, P 8200, PEX 3000, SE Ex Polytron 7000 and 8000 OV1	10 // 100 %LEL as EO x 10 (20 / 50 / 200 ppm x 10)	polymerizing/sensor poison S = 0.1 (L)
11	1.2 (2.7)	2 (4.4)	CT EC	P 5200, P 8200, PEX 3000, SE Ex Polytron 7000 and 8000 OV2	10 // 100 %LEL ACN: 20 / 50 / 100 ppm / LDL = 5 ppm	polymerizing/sensor poison S = 0.2

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12	Allyl acetate CAS 591-87-7 CH ₃ COOCH ₂ CH=CH ₂	C ₆ H ₈ O ₂	Acetic acid allyl ester Propenyl acetate 2-Propenyl methanoate	100.1 3.46 r 114 v	0.93	103 217 °F	27	11 52 °F	1.7 (71)	1.7 (71)	1 mg/m ³ = 0.24 ppm		1.7 (71)	375 IIA T2
13	Allyl alcohol CAS 107-18-6 CH ₂ =CHCH ₂ OH	AA C ₃ H ₆ O	2-Propen-1-ol Vinyl carbinol Propenyl alcohol 3-Hydroxypropene	58.1 2.01 r 107 v	0.85	97 207 °F	24	21 70 °F	2.5 (61)	2.5 (61)	2.5 (61)	2.5 (61)	2.5 (61)	375 IIB T2
14	Allylamine CAS 107-11-9 CH ₂ =CHCH ₂ NH ₂	C ₃ H ₇ N	3-Aminoprop-1-ene 2-Propene-1-amine 1-Amino propylene 2-Propenylamine	57.1 1.97 r 103 v	0.76	53 127 °F	262	<-20 <-4 °F	2.2 (52)		2.2 (52)	1 mg/m ³ = 0.42 ppm		370 T2
15	Allyl bromide CAS 106-95-6 CH ₂ =CHCH ₂ Br	C ₃ H ₅ Br	3-Bromopropene Bromoallylene Propylene bromide	121.0 4.18 r 232 v	1.40	70 158 °F	150	-1 30 °F	4.3 (217)			4.4 (222)		295 IIA T3
16	Allyl chloride CAS 107-05-1 CH ₂ =CHCH ₂ Cl	C ₃ H ₅ Cl	3-Chloro-1-propene 3-Chloropropylene Propylenechloride Chloroallylene	76.5 2.64 r 162 v	0.94	45 113 °F	398	<-20 <-4 °F	3.2 (102)	2.9 (92)	2.9 (92)	2.9 (92)	2.9 (92)	390 IIA T2
17	Allylglycidylether CAS 106-92-3 CH ₂ =CHCH ₂ OC ₃ H ₅ O	AGE C ₆ H ₁₀ O ₂	Allyl-2,3-epoxypropylether 1,2-Epoxy-3-allyloxypropane 1-Allyloxy-2,3-epoxypropane Glycidyl allyl ether	114.1 3.94 r	0.97	154 309 °F	2.6	45 113 °F	1.3** (62)		1 mg/m ³ = 0.21 ppm			249 IIB T3
18	Allyl methacrylate CAS 96-05-9 CH ₂ =C(CH ₃)COOCH ₂ CH=CH ₂	AMA C ₇ H ₁₀ O ₂	Allyl-2-methyl acrylate Methacrylic acid allyl ester 2-Methyl-2-propenyl-2-propenoate 2-Propenoic acid-2-methyl-2-propenyl ester 2-Methyl-2-propionic acid-2-propenyl ester	126.2 4.36 r	0.93	140 284 °F	8	33 91 °F	1.2 (63)		1 mg/m ³ = 0.19 ppm			
19	2-Aminobutanol CAS 96-20-8 C ₂ H ₅ CH(NH ₂)CH ₂ OH	C ₄ H ₁₁ NO	2-Amino-1-butanol 2-Aminobutan-1-ol 1-Hydroxy-2-aminobutane 1-Hydroxy-2-butylamine	89.1 3.08 r	0.94	173 343 °F	0.2		1.6** (59)		1 mg/m ³ = 0.27 ppm			
20	Ammonia CAS 7664-41-7 NH ₃	H ₃ N	Anhydrous ammonia R717	17.0 0.59 r	Gas	-33.4 -28 °F	Gas	Gas	15.4 (109)	15.0 (106)	15.0 (106)	15.0 (106)	15.0 (106)	630 IIA T1

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
12			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
			EC	Polytron 7000 and 8000 OV1	as EO (20 / 50 / 200 ppm)	S = 1.0 (L)
13	2 (4.8)	2 (4.8)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and 8000 OV1	as EO (20 / 50 / 200 ppm)	S = 1.0 (L)
14			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (\$)	
			IR	P 5700 type 334	100 %LEL (\$)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
			EC	Polytron 7000 and 8000 NH3 LC	as NH3 x 2 (50 / 100 ppm x 2)	S = 0.45 (L)
			EC	Polytron 7000 and 8000 OV1	as C3H6 (30 / 50 / 100 ppm)	S = 0.7 (L)
15			EC	Polytron 7000 and 8000 OV1	as Aald (50 / 100 / 200 ppm)	S = 0.3 (L)
16		1 (3.2)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL // 9600 ppm Gas-Library	PIR 7000 / P 8700 performance approved
			IR	P 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	45 / 100 %LEL // 12800 ppm Gas-Library	PIR 7000 / P 8700 performance approved
			IR	P 5700 type 340	50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
			EC	Polytron 7000 and 8000 OV1	as Aald x 2 (50 / 100 / 200 ppm x 2)	S = 0.15 (L)
17		5 (24)	EC	Polytron 7000 and 8000 OV1	as Aald (50 / 100 / 200 ppm)	S = 0.4 (L)
18			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	35 / 100 %LEL	
			IR	P 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
19			IR	PIR 7000 type 340, P 8700 type 340	30 / 100 %LEL	
			IR	P 5700 type 340	50 + 100 %LEL	
20	20 (14)	50 (35)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	SE Ex / PEX 3000 / P 8200 performance approved
			EC	Polytron 7000 and 8000 NH3 HC	300 / 1000 / 1000 ppm / LDL = 30 ppm	
			EC	Polytron 7000 and 8000 NH3 LC	NH3: 50 / 100 / 300 ppm / LDL = 5 ppm	
			EC	Polytron 5100 NH3 HC	300 / 500 ppm	
			EC	Polytron 5100 NH3 LC	50 / 100 ppm	
			EC	Polytron 3000 NH3 HC	300 / 1000 ppm	
			EC	Polytron 3000 NH3 LC	100 ppm	
			EC	Polytron 2000 NH3	200 ppm	

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21	i-Amyl acetate CAS 123-92-2 CH ₃ COOC ₅ H ₁₁	C ₇ H ₁₄ O ₂	Isoamyl acetate Acetic acid i-amylester i-Pentyl acetate Isopentyl acetate 3-Methyl butyl acetate	130.2 4.49 r 93 v	0.87	142 288 °F	5.3	25 77 °F	1.0 (54)		1.0 (54)	1.0 (54)		380 IIA T2
22	n-Amyl acetate CAS 628-63-7 CH ₃ COOC ₅ H ₁₁	C ₇ H ₁₄ O ₂	n-Pentyl acetate Acetic acid n-amyl ester Acetic acid pentyl ester Amyl acetic ester	130.2 4.49 r	0.88	149 300 °F	5.3	41 106 °F	1.0 (54)	1.0 (54)	1.1 (60)	1.1 (60)	1.0 (54)	350 IIA T2
23	i-Amyl alcohol CAS 123-51-3 (CH ₃) ₂ CH(CH ₂) ₂ OH	C ₆ H ₁₂ O	3-Methylbutan-1-ol i-Pentanol i-Butyl carbinol Isoamyl alcohol Isopentanol Isobutyl carbinol Isopentyl alcohol	88.2 3.04 r	0.81	131 268 °F	2.7	42 108 °F	1.2 (44)	1.3 (48)	1.2 (44)	1.2 (44)	1.3 (48)	340 IIA T2
24	n-Amyl alcohol CAS 71-41-0 C ₅ H ₁₁ OH	C ₆ H ₁₂ O	n-Pentanol 1-Pentanol Pentan-1-ol n-Pentyl alcohol n-Butyl carbinol	88.2 3.04 r	0.81	138 280 °F	1.3	43 109 °F	1.3 (48)	1.06 (39)		1.2 (44)	1.06 (39)	320 IIA T2
25	tert-Amyl alcohol CAS 75-85-4 (CH ₃) ₂ C(OH)C ₂ H ₅	C ₆ H ₁₂ O	2-Methylbutan-2-ol Dimethyl ethyl carbinol tert-Pentanol	88.2 3.04 r 88 v	0.81	102 216 °F	16	19 66 °F	1.3 (48)	1.4 (51)		1.2 (44)	1.4 (51)	435 IIA T2
26	n-Amylamine CAS 110-58-7 C ₆ H ₁₁ NH ₂	C ₆ H ₁₃ N	1-Aminopentane Monoamylamine 1-Pentane amine	87.2 3.01 r 93 v	0.76	104 219 °F	31	7 45 °F	1.3 (47)			2.2 (80)		IIA
27	i-Amylchloride CAS 107-84-6 (CH ₃) ₂ CHC ₂ H ₄ Cl	C ₆ H ₁₁ Cl	i-Pentylchloride 1-Chloro-3-methylbutane Isoamylchloride Isopentylchloride	106.6 3.68 r 112 v	0.89	100 212 °F		1 34 °F	1.5 (67)			1.5 (67)		240 IIA T3
28	n-Amylchloride CAS 543-59-9 C ₆ H ₁₁ Cl	C ₆ H ₁₁ Cl	Amyl chloride 1-Chloropentane Pentylchloride	106.6 3.68 r 106 v	0.88	108 226 °F	32	3 37 °F	1.4 (62)			1.6 (71)		255 IIA T3
29	i-Amyl formate CAS 110-45-2 HCOOC ₅ H ₁₁	C ₆ H ₁₂ O ₂	Formic acid i-pentylester i-Pentyl formate 3-Methyl-1-butylformate Isoamyl formate Isopentyl formate	116.2 4.01 r 140 v	0.88	124 255 °F	15	22 72 °F	1.7 (82)					320 IIA T2
30	tert-Amyl methyl ether CAS 994-05-8 CH ₃ OC(CH ₃) ₂ CH ₂ CH ₃	TAME C ₆ H ₁₄ O	Methyl-tert-amylether 2-Methoxy-2-methyl butane 2-Methyl-2-methoxybutane Methyl-tert-pentylether tert-Pentyl methyl ether 1,1-Dimethyl propylmethyl ether	102.2 3.53 r 99 v	0.77	86 187 °F	76	-18 0 °F	1.2 (51)	1.18 (50)			1.5 (64)	345 IIA T2

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
21	50 (271)	100 (543)	CT IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 340, P 8700 type 340 P 5700 type 340	100 %LEL 100 %LEL (?) 100 %LEL (?)	
22	50 (271)	100 (543)	CT IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 340, P 8700 type 340 P 5700 type 340	100 %LEL 100 %LEL (?) 100 %LEL (?)	
23		100 (368)	CT IR IR IR IR IR EC	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 P 5700 type 334 PIR 7000 type 340, P 8700 type 340 P 5700 type 340 PIR 3000, P 5310, P 8310 Polytron 7000 and 8000 OV1	100 %LEL 30 / 100 %LEL 50 + 100 %LEL 10 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL (?) as EtOH (100 / 200 / 300 ppm)	S = 0.6
24			CT IR IR IR IR IR EC	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 P 5700 type 334 PIR 7000 type 340, P 8700 type 340 P 5700 type 340 PIR 3000, P 5310, P 8310 Polytron 7000 and 8000 OV1	100 %LEL 25 / 100 %LEL 50 + 100 %LEL 10 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL as Aald (50 / 100 / 200 ppm)	S = 0.3 (L)
25			IR IR IR IR	PIR 7000 type 334, P 8700 type 334 P 5700 type 334 PIR 7000 type 340, P 8700 type 340 P 5700 type 340	100 %LEL (\$) 100 %LEL (\$) 100 %LEL (?) 100 %LEL (?)	
26			CT IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 340, P 8700 type 340 P 5700 type 340	100 %LEL 100 %LEL (?) 100 %LEL (?)	corrosive/sensor poison
27			CT IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 340, P 8700 type 340 P 5700 type 340	100 %LEL 100 %LEL (?) 100 %LEL (?)	corrosive/sensor poison
28			CT IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 340, P 8700 type 340 P 5700 type 340	100 %LEL 100 %LEL (?) 100 %LEL (?)	corrosive/sensor poison
29			CT IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 340, P 8700 type 340 P 5700 type 340	100 %LEL 100 %LEL (?) 100 %LEL (?)	
30			CT IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 340, P 8700 type 340 P 5700 type 340	100 %LEL 100 %LEL (?) 100 %LEL (?)	

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31	Aniline CAS 62-53-3 C ₆ H ₅ NH ₂	C ₆ H ₇ N	Aminobenzene Benzenamine Phenylamine	93.1 3.21 r	1.02	184 363 °F	0.7	76 169 °F	1.2 (47)	1.2 (47)	1.3 (50)	1.3 (50)	1.2 (47)	630 IIA T1
32	Anisole CAS 100-66-3 C ₆ H ₅ OCH ₃	MOB C ₇ H ₈ O	Methoxybenzene Phenyl methyl ether Methyl phenyl ether Phenoxy methane	108.1 3.73 r	0.99	154 309 °F	3.6	41 106 °F	1.2 (54)		1 mg/m ³ = 0.22 ppm			475 IIB T1
33	Antimony pentachloride CAS 7647-18-9 SbCl ₅	Cl ₅ Sb	Antimony-(V)-chloride	299.0 10.32 r	2.33	150 302 °F	1	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
34	Arsenic hydride CAS 7784-42-1 AsH ₃	H ₃ As	Hydrogen arsenide Arsine Arsenic trihydride	77.9 2.69 r	Gas	-62 -80 °F	Gas	Gas	3.9 (127)		5.1 (166)			285 T3
35	Benzene CAS 71-43-2 C ₆ H ₆	C ₆ H ₆	Benzol Phenyl hydride Cyclohexatriene	78.1 2.70 r 66 v	0.88	80 176 °F	100	-11 12 °F	1.2 (39)	1.2 (39)	1.2 (39)	1.2 (39)	1.2 (39)	555 IIA T1
36	Benzyl chloride CAS 100-44-7 C ₆ H ₅ CH ₂ Cl	C ₇ H ₇ Cl	Chloro methylbenzene a-Chlorotoluene	126.6 4.37 r	1.10	179 354 °F	1.2	60 140 °F	1.1 (58)	1.1 (58)	1.1 (58)	1.1 (58)	1.2 (63)	585 IIA T1
37	Boron tribromide CAS 10294-33-4 BBr ₃	BBr ₃	Triboroborane Boron bromide	250.5 8.65 r	2.69	90 194 °F	72	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
38	Boron trichloride CAS 10294-34-5 BCl ₃	BCl ₃	Trichloroborane Boron chloride	117.2 4.05 r	Gas	12.6 55 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
39	Bromine CAS 7726-95-6 Br ₂	Br ₂		159.8 5.52 r	3.12	58.8 138 °F	220	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
40	1,2-Butadiene CAS 590-19-2 H ₂ C=C=CHCH ₃	C ₄ H ₆	Methylallene	54.1 1.87 r	Gas	10.8 51 °F	Gas	Gas	1.6 (36)		1 mg/m ³ = 0.44 ppm			340 T2
41	1,3-Butadiene CAS 106-99-0 CH ₂ =CH-CH=CH ₂	C ₄ == C ₄ H ₆	Erythrene Vinylethylene Divinyl Biethylene	54.1 1.87 r	Gas	-5 23 °F	Gas	Gas	1.4 (32)	1.4 (32)	2.0 (45)	2.0 (45)	1.4 (32)	415 IIB T2
42	1,3-Butadiene monoxide CAS 930-22-3 H ₂ C=CH-CHCH ₂ O	C ₄ H ₆ O	3,4-Epoxybut-1-ene Ethenyl oxirane Vinylethylene oxide	70.1 2.42 r	0.87	66 151 °F		<-20 <-4 °F			1 mg/m ³ = 0.34 ppm			430 T2
43	i-Butane CAS 75-28-5 (CH ₃) ₃ CH	C ₄ H ₁₀	Isobutane 2-Methylpropane Trimethylmethane 1,1-Dimethylethane R600a	58.1 2.01 r	Gas	-12 10 °F	Gas	Gas	1.5 (36)	1.3 (31)	1.6 (39)	1.8 (44)	1.3 (31)	460 IIA T1

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
31	2 (7.8)	5 (19)	IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
32			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	25 / 100 %LEL	
			IR	P 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
33			EC	Polytron 7000 and 8000 AC	Acid: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
			EC	Polytron 7000 and 8000 HCl	AnPC: 5 / 10 / 20 ppm / LDL = 0.2 ppm	
34	0.005 (0.02)	0.05 (0.16)	EC	Polytron 7000 and 8000 Hydride	AsH ₃ : 0.3 / 1 / 20 ppm / LDL = 0.03 ppm	
			EC	Polytron 7000 and 8000 Hydride SC	AsH ₃ : 0.3 / 1 / 1 ppm / LDL = 0.01 ppm	
			EC	Polytron 7000 and 8000 PH ₃ /AsH ₃	AsH ₃ : 0.3 / 1 / 20 ppm / LDL = 0.02 ppm	
35	0.6 (2.0)	1 (3.3)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	SE Ex / PEX 3000 / P 8200 performance approved
			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL // 3600 ppm Gas-Library	PIR 7000 / P 8700 performance approved
			IR	P 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
36		1 (5.3)	PY	Pyrolyzer Polytron 7500 PFC	50 ppm / LDL = 1 ppm	S = 0.5
37		1c (10)	EC	Polytron 7000 and 8000 AC	Acid: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
			EC	Polytron 7000 and 8000 HCl	as BCl ₃ (5 / 10 / 20 ppm)	
38			EC	Polytron 7000 and 8000 AC	BCl ₃ : 3 / 10 / 10 ppm / LDL = 0.5 ppm	
			EC	Polytron 7000 and 8000 HCl	BCl ₃ : 5 / 10 / 20 ppm / LDL = 0.2 ppm	
			EC	Polytron 3000 BCl ₃	10 ppm	
39	0.1 (0.67)	0.1 (0.67)	EC	Polytron 7000 and 8000 Cl ₂	Br ₂ : 1 / 10 / 50 ppm	
40			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	25 / 100 %LEL	
			IR	P 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
41	2 (4.5)	1 (2.3)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	SE Ex / PEX 3000 / P 8200 performance approved
			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL // 4900 ppm Gas-Library	
			IR	P 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and 8000 OV1	BTD: 20 / 50 / 200 ppm / LDL = 5 ppm	S = 1.2
42			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (\$)	
			IR	P 5700 type 334	100 %LEL (\$)	
43	1000 (2421)	800 (1937)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 2600 ppm Gas-Library	PIR 7000 / P 8700 performance approved
			IR	P 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 1040 ppm Gas-Library	PIR 7000 / P 8700 performance approved
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	PIR 3000 / P 8310 performance approved
			OP	Polytron Pulsar 2	1 // 4 / 8 LELm	CSF = 1.07 (Propane = 1.00) / LEL = 1.5

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Fipt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
44	n-Butane CAS 106-97-8 C ₄ H ₁₀	C ₄ H ₁₀	Methylethylmethane R600	58.1 2.01 r	Gas	-0.5 31 °F	Gas	Gas	1.4 (34)	1.4 (34)	1.6 (39)	1.9 (46)	1.4 (34)	365 IIA T2
						1 ppm = 2.42 mg/m ³					1 mg/m ³ = 0.41 ppm			
45	2-Butanol CAS 78-92-2 C ₂ H ₅ CH(OH)CH ₃	SBA C ₄ H ₁₀ O	sec-Butyl alcohol Butan-2-ol Methyl ethyl carbinol 2-Hydroxybutane 1-Methyl propanol	74.1 2.56 r 97 v	0.81	99 210 °F	17	23 73 °F	1.7 (52)	1.7 (52)	1.7 (52)	1.7 (52)		390 IIB T2
						1 ppm = 3.09 mg/m ³					1 mg/m ³ = 0.32 ppm			
46	i-Butanol CAS 78-83-1 (CH ₃) ₂ CHCH ₂ OH	IBA C ₄ H ₁₀ O	Isobutanol Isobutyl alcohol i-Butyl alcohol 2-Methyl-1-propanol i-Propyl carbinol Isopropyl carbinol	74.1 2.56 r 81 v	0.80	108 226 °F	12	27 81 °F	1.4 (43)	1.4 (43)	1.7 (52)	1.7 (52)	1.7 (52)	430 IIA T2
						1 ppm = 3.09 mg/m ³					1 mg/m ³ = 0.32 ppm			
47	n-Butanol CAS 71-36-3 C ₄ H ₉ OH	NBA C ₄ H ₁₀ O	1-Butanol Butan-1-ol n-Butyl alcohol Propyl carbinol 1-Hydroxybutane	74.1 2.56 r	0.81	118 244 °F	7	35 95 °F	1.4 (43)	1.4 (43)	1.4 (43)	1.4 (43)	1.7 (52)	325 IIB T2
						1 ppm = 3.09 mg/m ³					1 mg/m ³ = 0.32 ppm			
48	tert-Butanol CAS 75-65-0 (CH ₃) ₃ COH	TBA C ₄ H ₁₀ O	tert-Butyl alcohol 2-Methyl-2-propanol Trimethyl carbinol 1.1-Dimethylethanol 2-Methylpropan-2-ol	74.1 2.56 r 82 v	0.79	83 181 °F	41	11 52 °F	1.4 (43)		2.4 (74)	2.4 (74)		470 IIA T1
						1 ppm = 3.09 mg/m ³					1 mg/m ³ = 0.32 ppm			
49	2-Butenal CAS 123-73-9 CH ₃ CH=CHCHO	C ₄ H ₆ O	Crotonaldehyde Crotonic aldehyde Propylene aldehyde	70.1 2.42 r 108 v	0.85	102 216 °F	24	8 46 °F	2.1 (61)			2.1 (61)	2.1 (61)	230 IIB T3
						1 ppm = 2.92 mg/m ³					1 mg/m ³ = 0.34 ppm			
50	1-Butene CAS 106-98-9 C ₂ H ₅ CH=CH ₂	C ₄ = C ₄ H ₈	1-Butylene But-1-ene Ethylethylene	56.1 1.94 r	Gas	-6 21 °F	Gas	Gas	1.5 (35)	1.6 (37)		1.6 (37)	1.6 (37)	360 IIA T2
						1 ppm = 2.34 mg/m ³					1 mg/m ³ = 0.43 ppm			
51	2-Butene CAS 107-01-7 CH ₃ CH=CHCH ₃	C ₄ = C ₄ H ₈	2-Butylene 1.2-Dimethylethylene	56.1 1.94 r	Gas	1 34 °F	Gas	Gas		1.6 (37)			1.6 (37)	325 IIB T2
						1 ppm = 2.34 mg/m ³					1 mg/m ³ = 0.43 ppm			

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
44	1000 (2421)	800 (1937)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	SE Ex / PEX 3000 / P 8200 performance approved PIR 7000 / P 8700 performance approved
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 2800 ppm Gas-Library	
			IR	P 5700 type 334	20 + 50 + 100 %LEL Gas-Library	PIR 7000 / P 8700 performance approved
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 700 ppm Gas-Library	
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	PIR 3000 / P 8310 performance approved CSF = 0.95 (Propane = 1.00) / LEL = 1.4
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
OP	Polytron Pulsar 2	1 // 4 / 8 LELm				
45		150 (463)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (\$)	
			IR	P 5700 type 334	100 %LEL (\$)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
46	100 (309)	100 (309)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL // 3500 ppm Gas-Library	
			IR	P 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 1120 ppm Gas-Library	
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
47	100 (309)	100 (309)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL // 3500 ppm Gas-Library	
			IR	P 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL // 700 ppm Gas-Library	
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
EC	Polytron 7000 and 8000 OV1	as EtOH (100 / 200 / 300 ppm)	S = 0.65			
48	20 (62)	100 (309)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL // 3500 ppm Gas-Library	
			IR	P 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL // 700 ppm Gas-Library	
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
49		2 (5.8)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (\$)	
			IR	P 5700 type 334	100 %LEL (\$)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
			EC	Polytron 7000 and 8000 OV1	as C3H6 x 0.5 (30 / 50 / 100 ppm x 0.5)	
50			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL // 3200 ppm Gas-Library	
			IR	P 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL // 2400 ppm Gas-Library	
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
51			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	P 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
52	i-Butene CAS 115-11-7 (CH ₃) ₂ C=CH ₂	iC4= C ₄ H ₈	Isobutene i-Butylene Isobutylene 2-Methylpropene 2-Methylprop-1-ene 1.1-Dimethylethylene	56.1 1.94 r	Gas	-7 19 °F	Gas	Gas	1.6 (37)	1.6 (37)		1.8 (42)	1.6 (37)	465 IIA T1
53	3-Butene-1-ol CAS 627-27-0 CH ₂ =CH(CH ₂) ₂ OH	C ₄ H ₈ O	Allylcarbinol 2-Vinylethan-1-ol Vinyl ethyl alcohol	72.1 2.49 r	0.84	112 234 °F		32 90 °F	2.0 (60)			4.7 (141)		IIB
54	2-Butoxyethanol CAS 111-76-2 C ₄ H ₉ OC ₂ H ₄ OH	EGBE C ₆ H ₁₄ O ₂	Ethylene glycol monobutyl ether Monobutyl glycol ether n-Butyl glycol Butyl cellosolve 1-Butoxy-2-hydroxy ethane Butyl oxitol	118.2 4.08 r	0.90	171 340 °F	1.2	61 142 °F	1.1 (54)	1.1 (54)	1.1 (54)	1.1 (54)		240 IIB T3
55	2-Butoxyethyl acetate CAS 112-07-2 CH ₃ COOC ₂ H ₄ OC ₂ H ₅	EGBEA C ₈ H ₁₆ O ₃	2-Butoxyethanol acetate Ethylene glycol monobutyl ether acetate Butyl glycol acetate Glycol monobutyl ether acetate Acetic acid-2-butoxyethyl ester Butyl cellosolve acetate 1-Acetoxy-2-butoxyethane	160.2 5.53 r	0.94	192 378 °F	0.31	74 165 °F	1.0 (67)	0.9 (60)	0.88 (59)	0.88 (59)		355 IIB T2
56	1-Butoxy-2-propanol CAS 5131-66-8 C ₄ H ₉ O-CH ₂ CH(OH)CH ₃	PGBE C ₇ H ₁₆ O ₂	1-Butoxy propan-2-ol n-Butoxypropanol Propylene glycol monobutylether Solvenon PnB	132.2 4.56 r	0.88	170 338 °F	1.3	59 138 °F	0.9 (50)					260 IIB T3
57	2-Butyl acetate CAS 105-46-4 CH ₃ COOCH(CH ₃)C ₂ H ₅	C ₆ H ₁₂ O ₂	sec-Butyl acetate 1-Methylpropyl acetate Acetic acid sec butyl ester	116.2 4.01 r 108 v	0.87	112 234 °F	25	16 61 °F	1.3 (63)	1.3 (63)	1.7 (82)	1.7 (82)		410 IIA T2
58	i-Butyl acetate CAS 110-19-0 CH ₃ COOCH ₂ CH(CH ₃) ₂	C ₆ H ₁₂ O ₂	Isobutyl acetate 2-Methylpropyl acetate Acetic acid i-butylester Acetic acid-2-methylpropyl ester i-Butyl ethanoate Isobutyl ethanoate	116.2 4.01 r 108 v	0.87	118 244 °F	20	18 64 °F	1.3 (63)		1.3 (63)	1.3 (63)		420 IIA T2
59	n-Butyl acetate CAS 123-86-4 CH ₃ COOC ₄ H ₉	BuAc C ₆ H ₁₂ O ₂	Acetic acid butylester n-Butyl ethanoate	116.2 4.01 r 99 v	0.88	127 261 °F	11	27 81 °F	1.2 (58)	1.2 (58)	1.7 (82)	1.3 (63)	1.3 (63)	390 IIA T2
60	tert-Butyl acetate CAS 540-88-5 CH ₃ COOC(CH ₃) ₃	C ₆ H ₁₂ O ₂	Acetic acid tert-butyl ester tert-Butyl ethanoate Acetic acid-1.1-dimethyl ethylester	116.2 4.01 r 110 v	0.86	97 207 °F	41	1 34 °F	1.3 (63)	1.3 (63)	1.5 (73)	1.7 (82)		435 IIA T2

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
52			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 3200 ppm Gas-Library	
			IR	P 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL // 2400 ppm Gas-Library	
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
53			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
54	10 (49)	50 (246)	IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 2200 ppm Gas-Library	
			IR	P 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL // 550 ppm Gas-Library	
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and 8000 OV1	as EtOH (100 / 200 / 300 ppm)	S = 0.65
55	20 (134)	20 (134)	IR	PIR 7000 type 334, P 8700 type 334	50 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
56			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	P 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
57	62 (300)	200 (968)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	P 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
58	62 (300)	150 (726)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (\$)	
			IR	P 5700 type 334	100 %LEL (\$)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (\$)	
			IR	P 5700 type 340	100 %LEL (\$)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
59	62 (300)	150 (726)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	SE Ex / PEX 3000 / P 8200 performance approved
			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL // 3250 ppm Gas-Library	
			IR	P 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL // 1950 ppm Gas-Library	
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
60	42 (203)	200 (968)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	P 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
61	i-Butyl acrylate CAS 106-63-8 CH ₂ =CHCOOC ₄ H ₉	C ₇ H ₁₂ O ₂	Isobutyl acrylate Acrylo-i-butyl ester 2-Methyl propyl acrylate 2-Propenoic acid-2-methylpropyl ester Propenoic acid i-butylester	128.2 4.43 r	0.89	132 270 °F	8.8		1.2* (64)		1 mg/m ³ = 0.19 ppm			
62	n-Butyl acrylate CAS 141-32-2 CH ₂ =CHCOOC ₄ H ₉	C ₇ H ₁₂ O ₂	Acrylobutyl ester Propenoic acid butyl ester Butyl-2-propenoate	128.2 4.43 r	0.90	148 298 °F	5.3	37 99 °F	1.2 (64)	1.2 (64)	1.5 (80)	1.5 (80)	1.2 (64)	275 IIB T3
63	i-Butyl amine CAS 78-81-9 (CH ₃) ₂ CHCH ₂ NH ₂	C ₄ H ₁₁ N	Isobutyl amine 2-Methylpropyl amine 2-Methyl-1-propane amine 1-Amino-2-methylpropane	73.1 2.52 r 114 v	0.76	66 151 °F	149	-13 9 °F	1.9 (58)	1.47 (45)		3.4 (104)	1.47 (45)	370 IIA T2
64	n-Butylamine CAS 109-73-9 C ₄ H ₉ NH ₂	C ₄ H ₁₁ N	1-Aminobutane 1-Butane amine Monobutylamine	73.1 2.52 r 105 v	0.74	78 172 °F	95	-14 7 °F	1.7 (52)	1.7 (52)	1.7 (52)	1.7 (52)	1.7 (52)	310 IIA T2
65	sec-Butylamine CAS 13952-84-6 C ₂ H ₅ CH(CH ₃)NH ₂	B2A C ₄ H ₁₁ N	2-Aminobutane 2-Butane amine 1-Methyl propylamine	73.1 2.52 r 108 v	0.72	63 145 °F	181	-20 -4 °F	1.7 (52)		1 mg/m ³ = 0.33 ppm			IIA
66	tert-Butylamine CAS 75-64-9 (CH ₃) ₃ CNH ₂	C ₄ H ₁₁ N	2-Amino-2-methylpropane 2-Methyl-2-propane amine 1.1-Dimethylethylamine	73.1 2.52 r 111 v	0.70	45 113 °F	394	<-30 <-22 °F	1.7 (52)			1.7 (52)		380 IIA T2
67	Bis(tert-butylamino)silane CAS 186598-40-3 ((CH ₃) ₃ CNH) ₂ SiH ₂	BTBAS C ₈ H ₂₂ N ₂ Si	N,N'-Di-tert-butylsilane diamine	174.4 6.02 r	0.82	166 331 °F	1.5				1 mg/m ³ = 0.14 ppm			
68	tert-Butyl arsine CAS 4262-43-5 (CH ₃) ₃ CA ₃ H ₂	TBAS C ₄ H ₁₁ As	2-Methyl-i-propyl arsine 1.1-Dimethylethyl arsine	134.1 4.63 r	1.08	68 154 °F	166				1 mg/m ³ = 0.18 ppm			
69	i-Butyl-i-butyrate CAS 97-85-8 (CH ₃) ₂ CHCOOCH ₂ CH(CH ₃) ₂	C ₈ H ₁₆ O ₂	i-Butyric acid i-butylester 2-Methylpropyl-i-butyrate i-Butyl-2-methyl propanoate Isobutyl isobutyrate Isobutyric acid isobutyl ester Isobutyl-2-methyl propanoate	144.2 4.98 r	0.85	147 297 °F	4	37 99 °F		0.8 (48)		0.96 (58)	0.8 (48)	430 IIA T2
70	i-Butyl chloride CAS 513-36-0 (CH ₃) ₂ CHCH ₂ Cl	C ₄ H ₉ Cl	Isobutyl chloride 1-Chloro-2-methylpropane 2-Methylpropyl chloride	92.6 3.20 r 131 v	0.88	69 156 °F	158	-21 -6 °F	2.0 (77)	2.0 (77)		2.0 (77)	2.0 (77)	416 IIA T2
71	n-Butyl chloride CAS 109-69-3 C ₄ H ₉ Cl	NBC C ₄ H ₉ Cl	Butylchloride 1-Chlorobutane n-Propylcarbonyl chloride	92.6 3.20 r 117 v	0.89	78 172 °F	112	-12 10 °F	1.8 (69)	1.8 (69)		1.8 (69)	1.8 (69)	245 IIA T3

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
61			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	S = 0.15 (L)
			IR	P 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
			EC	Polytron 7000 and 8000 OV1	as Aald x 2 (50 / 100 / 200 ppm x 2)	
62	2 (11)	10 (53)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	polymerizing/sensor poison S = 0.15 (L)
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 2400 ppm Gas-Library	
			IR	P 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 1200 ppm Gas-Library	
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and 8000 OV1	as Aald x 2 (50 / 100 / 200 ppm x 2)	
63			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
64		5c (15)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
65			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
66			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
67			EC	Polytron 7000 and 8000 Hydride	BTBS: 5 / 20 / 20 ppm / LDL = 0.4 ppm	
68			EC	Polytron 7000 and 8000 Hydride SC	as PH3 x 0.75 (0.3 / 1.0 ppm x 0.75)	S = 1.5 (L)
69			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
70			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	P 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
71	25 (96)		CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	P 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
72	tert-Butylchloride CAS 507-20-0 (CH ₃) ₃ CCl	C ₄ H ₉ Cl	2-Chloro-2-methylpropane Trimethylchloromethane	92.6 3.20 r	0.84	51 124 °F	317	-33 -27 °F	1.8* (69)		1 mg/m ³ = 0.26 ppm			541 IIA T1
73	i-Butyl formate CAS 542-55-2 HCOOC ₄ H ₉	C ₅ H ₁₀ O ₂	Isobutyl formate Formic acid i-butylester 2-Methylpropyl formate	102.1 3.52 r 123 v	0.88	98 208 °F	43	5 41 °F	1.7 (72)		1 mg/m ³ = 0.24 ppm	1.7 (72)		320 T2
74	n-Butyl formate CAS 592-84-7 HCOOC ₄ H ₉	C ₅ H ₁₀ O ₂	Formic acid butyl ester Butyl methanoate	102.1 3.52 r 111 v	0.92	106 223 °F	31	18 64 °F	1.6 (68)		1 mg/m ³ = 0.24 ppm	1.7 (72)		265 T3
75	n-Butyl mercaptan CAS 109-79-5 C ₄ H ₉ SH	NBM C ₄ H ₁₀ S	1-Butanethiol Butane-1-thiol 1-Mercaptobutane Thiobutyl alcohol	90.2 3.11 r 94 v	0.84	98 208 °F	40	1 34 °F	1.4 (53)	1.4 (53)	1 mg/m ³ = 0.27 ppm			272 T3
76	tert-Butyl mercaptan CAS 75-66-1 (CH ₃) ₃ CSH	tBM C ₄ H ₁₀ S	2-Methylpropane-2-thiol 1,1-Dimethyl ethanethiol 2-Methyl-2-propanethiol	90.2 3.11 r	0.83	64 147 °F	195	-26 -15 °F	1.3* (49)		1 mg/m ³ = 0.27 ppm			
77	Butyl methacrylate CAS 97-88-1 CH ₂ =C(CH ₃)COOC ₄ H ₉	BMA C ₈ H ₁₄ O ₂	n-Butyl methacrylate 2-Methyl butylacrylate 2-Methyl-2-propenoic acid butylester Methacrylic acid butylester	142.2 4.91 r	0.90	163 325 °F	2.7	50 122 °F	1.0 (59)	1.0 (59)	1 mg/m ³ = 0.17 ppm		1.0 (59)	290 IIA T3
78	But-2-yne CAS 503-17-3 CH ₃ CCCH ₃	C ₄ H ₆	2-Butyne Dimethyl acetylene Crotonylene	54.1 1.87 r 68 v	0.69	27 81 °F	774	<-20 <-4 °F	1.4 (32)		1 mg/m ³ = 0.44 ppm	1.4 (32)		
79	i-Butyraldehyde CAS 78-84-2 (CH ₃) ₂ CHCHO	C ₄ H ₈ O	i-Butanal Isobutanal i-Butyric aldehyde Isobutyraldehyde 2-Methyl propanal Isobutyric aldehyde	72.1 2.49 r 91 v	0.79	64 147 °F	184	-24 -11 °F	1.6 (48)	1.6 (48)	1 mg/m ³ = 0.33 ppm	1.6 (48)	1.6 (48)	165 IIA T4
80	n-Butyraldehyde CAS 123-72-8 C ₃ H ₇ CHO	C ₄ H ₈ O	n-Butanal Butyl aldehyd Butyric acid aldehyde n-Butyric aldehyde	72.1 2.49 r 96 v	0.80	75 167 °F	113	-11 12 °F	1.7 (51)	1.7 (51)	1 mg/m ³ = 0.33 ppm	1.9 (57)	1.8 (54)	190 IIA T4
81	Carbon dioxide CAS 124-38-9 CO ₂	CO ₂	Carbonic anhydride Carbonic acid anhydride R744	44.0 1.52 r	Gas	-78.5 -109 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
						1 ppm = 1.83 mg/m ³					1 mg/m ³ = 0.55 ppm			

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
72			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	P 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
73			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	P 5700 type 334	100 %LEL (?)	
74			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	P 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
75	0.5 (1.9)	10 (38)	IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (\$)	
			IR	P 5700 type 334	100 %LEL (\$)	
76			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (\$)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and 8000 H2S LC	tBM: 20 / 50 / 100 ppm / LDL = 1 ppm	
77			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	P 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
78			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
79			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	S = 0.15 (L)
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and 8000 OV1	as Aald x 2 (50 / 100 / 200 ppm x 2)	
80	20 (60)		CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	S = 0.15 (L)
			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL // 5100 ppm Gas-Library	
			IR	P 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL // 2550 ppm Gas-Library	
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
			EC	Polytron 7000 and 8000 OV1	as Aald x 2 (50 / 100 / 200 ppm x 2)	
81	5000 (9167)	5000 (9167)	IR	PIR 7200, P 5720, P 8720	2000 ppm / 10 vol% / 30 vol%	

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
82	Carbon monoxide CAS 630-08-0 CO	CO	Carbon oxide Carbonic oxide	28.0 0.97 r	Gas	-192 -314 °F	Gas	Gas	10.9 (127)	10.9 (127)	12.5 (146)	12.5 (146)	10.9 (127)	605 IIA T1
						1 ppm = 1.17 mg/m ³					1 mg/m ³ = 0.86 ppm			
83	Carbon tetrachloride CAS 56-23-5 CCl ₄	Tetra CCl ₄	Tetrachlorocarbon Tetrachloromethane R10	153.8 5.31 r	1.59	76 169 °F	120	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
						1 ppm = 6.41 mg/m ³					1 mg/m ³ = 0.16 ppm			
84	Chlorine CAS 7782-50-5 Cl ₂	Cl ₂		70.9 2.45 r	Gas	-34 -29 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
						1 ppm = 2.95 mg/m ³					1 mg/m ³ = 0.34 ppm			
85	Chlorine dioxide CAS 10049-04-4 ClO ₂	ClO ₂	Chlorine peroxide	67.5 2.33 r	Gas	11 52 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
						1 ppm = 2.81 mg/m ³					1 mg/m ³ = 0.36 ppm			
86	Chlorine trifluoride CAS 7790-91-2 ClF ₃	ClF ₃	Chlorotrifluoride	92.4 3.19 r	Gas	12 54 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
						1 ppm = 3.85 mg/m ³					1 mg/m ³ = 0.26 ppm			
87	2-Chloroacetaldehyde CAS 107-20-0 CH ₂ ClCHO	C ₂ H ₃ ClO	2-Chloro-1-ethanal Monochloroacetaldehyde	78.5 2.71 r	1.21	86 187 °F	133			5.7 (186)				
						1 ppm = 3.27 mg/m ³					1 mg/m ³ = 0.31 ppm			
88	Chlorobenzene CAS 108-90-7 C ₆ H ₅ Cl	MCB C ₆ H ₅ Cl	Phenyl chloride Monochlorobenzene Benzene chloride Chlorobenzol	112.6 3.89 r 82 v	1.11	132 270 °F	12	28 82 °F	1.3 (61)	1.3 (61)	1.3 (61)	1.3 (61)	1.4 (66)	590 IIA T1
						1 ppm = 4.69 mg/m ³					1 mg/m ³ = 0.21 ppm			
89	3-Chloro-2-butanone CAS 4091-39-8 CH ₃ CHClCOCH ₃	C ₄ H ₇ ClO	1-Chloroethyl methyl ketone	106.6 3.68 r	1.06	115 239 °F	23		2.3* (102)					
						1 ppm = 4.44 mg/m ³					1 mg/m ³ = 0.23 ppm			
90	1-Chlorobut-2-ene CAS 591-97-9 CH ₃ CH=CHCH ₂ Cl	C ₄ H ₇ Cl	Crotyl chloride	90.6 3.13 r	0.93	85 185 °F	494	<0				4.2 (159)		
						1 ppm = 3.78 mg/m ³					1 mg/m ³ = 0.26 ppm			
91	1-Chloro-1,1-difluoroethane CAS 75-68-3 CH ₃ CClF ₂	C ₂ H ₃ ClF ₂	Difluoro chloroethane R142b HCFC 142b	100.5 3.47 r	Gas	-10 14 °F	Gas	Gas	6.3 (264)			6.2 (260)		IIA
						1 ppm = 4.19 mg/m ³					1 mg/m ³ = 0.24 ppm			
92	Chlorodifluoromethane CAS 75-45-6 CHClF ₂	CHClF ₂	Difluorochloromethane R22 HCFC 22	86.5 2.99 r	Gas	-40.8 -41 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
						1 ppm = 3.60 mg/m ³					1 mg/m ³ = 0.28 ppm			
93	Chlorodimethylsilane CAS 1066-35-9 (CH ₃) ₂ Si(H)Cl	DMCS C ₂ H ₇ ClSi	Dimethylchlorosilane Dimethylsilyl chloride	94.6 3.27 r	0.85	35 95 °F	582	<-28 <-18 °F	3.0* (118)					IIC
						1 ppm = 3.94 mg/m ³					1 mg/m ³ = 0.25 ppm			
94	Chloroethanol CAS 107-07-3 Cl-CH ₂ CH ₂ -OH	C ₂ H ₅ ClO	2-Chloroethan-1-ol 2-Chloroethyl alcohol Ethylene chlorohydrin Glycol chlorohydrin	80.5 2.78 r	1.21	129 264 °F	7.1	55 131 °F	5.0 (168)	4.9 (164)	4.9 (164)	4.9 (164)	5.0 (168)	425 IIA T2
						1 ppm = 3.35 mg/m ³					1 mg/m ³ = 0.30 ppm			

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
82	30 (35)	50 (58)	CT EC EC EC EC EC EC	P 5200, P 8200, PEX 3000, SE Ex Polytron 7000 and 8000 CO Polytron 7000 and 8000 CO LS Polytron 5100 CO Polytron 3000 CO Polytron 3000 CO LS Polytron 2000 CO	10 // 100 %LEL CO: 50 / 300 / 1000 ppm / LDL = 5 ppm CO: 200 / 1000 / 5000 ppm / LDL = 10 ppm 50 / 100 / 200 / 300 / 500 ppm 100 / 300 / 1000 ppm 300 ppm 300 / 1000 ppm	
83	0.5 (3.2)	10 (64)	PY	Pyrolyzer Polytron 7500 PFC	20 ppm / LDL = 0.5 ppm	S = 1.5
84	0.5 (1.5)	1c (3.0)	EC EC EC EC	Polytron 7000 and 8000 Cl2 Polytron 5100 Cl2 Polytron 3000 Cl2 Polytron 2000 Cl2	Cl2: 1 / 10 / 50 ppm 5 / 10 / 20 / 50 ppm 1 / 10 / 25 ppm 10 ppm	
85	0.1 (0.28)	0.1 (0.28)	EC	Polytron 7000 and 8000 Cl2	ClO2: 1 / 10 / 50 ppm	S = 0.6
86		0.1c (0.39)	EC	Polytron 7000 and 8000 AC	ClF3: 3 / 3 / 30 ppm / LDL = 0.5 ppm	approved for cross-calibration with Cl2
87		1c (3.3)	EC	Polytron 7000 and 8000 OV1	as C3H6 x 0.5 (30 / 50 / 100 ppm x 0.5)	S = 1.4 (L)
88	10 (47)	75 (352)	CT IR IR PY	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 P 5700 type 334 Pyrolyzer Polytron 7500 PFC	10 // 100 %LEL 50 / 100 %LEL // 6500 ppm Gas-Library 50 + 100 %LEL Gas-Library 60 ppm / LDL = 1 ppm	corrosive/sensor poison PIR 7000 / P 8700 performance approved S = 0.4
89			IR IR IR IR	PIR 7000 type 334, P 8700 type 334 P 5700 type 334 PIR 7000 type 340, P 8700 type 340 P 5700 type 340	35 / 100 %LEL 50 + 100 %LEL 40 / 100 %LEL 50 + 100 %LEL	
90			CT EC	P 5200, P 8200, PEX 3000, SE Ex Polytron 7000 and 8000 OV1	100 %LEL as Aald x 2 (50 / 100 / 200 ppm x 2)	corrosive/sensor poison S = 0.15 (L)
91	1000 (4188)		IR IR IR IR	PIR 7000 type 334, P 8700 type 334 P 5700 type 334 PIR 7000 type 340, P 8700 type 340 P 5700 type 340	50 / 100 %LEL // 31000 ppm Gas-Library 50 + 100 %LEL Gas-Library 90 / 100 %LEL (&) 100 %LEL (&)	
92	1000 (3604)	1000 (3604)	PY	Pyrolyzer Polytron 7500 PFC	CDFM: 50 / 50 ppm / LDL = 0.5 ppm	
93			IR IR IR IR IR	PIR 7000 type 334, P 8700 type 334 P 5700 type 334 PIR 7000 type 340, P 8700 type 340 P 5700 type 340 PIR 3000, P 5310, P 8310	25 / 100 %LEL 50 + 100 %LEL 20 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL (?)	
94	1 (3.4)	5 (17)	EC	Polytron 7000 and 8000 OV1	as EO x 0.5 (20 / 50 / 100 ppm x 0.5)	S = 2.0 (L)

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
95	Chloromethyl methylether CAS 107-30-2 ClCH ₂ OCH ₃	CMME C ₂ H ₅ ClO	Chlorodimethyl ether Chloromethoxymethane Methylchloromethyl ether Methoxy methylchloride Dimethylchloroether	80.5 2.78 r	1.06	59 138 °F	213	-8 18 °F			1 mg/m ³ = 0.30 ppm		4.4 (148)	IIA
96	2-Chloropropene CAS 557-98-2 CH ₂ =C(Cl)CH ₃	C ₃ H ₅ Cl	2-Chloropropylene i-Propenyl chloride Isopropenyl chloride	76.5 2.64 r 128 v	0.93	23 73 °F	915	<-20 <-4 °F	2.5 (80)		1 mg/m ³ = 0.31 ppm	4.5 (143)		
97	Chlorosulfonic acid CAS 7790-94-5 HSO ₃ Cl	HClO ₃ S	Chlorosulfuric acid Sulfuric chlorohydrin Sulfuryl oxychloride	116.5 4.02 r	1.75	151 304 °F	0.45	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
98	2-Chlorotoluene CAS 95-49-8 CH ₃ C ₆ H ₄ Cl	C ₇ H ₇ Cl	1-Chloro-2-methylbenzene o-Chlorotoluene o-Tolyl chloride	126.6 4.37 r	1.08	159 318 °F	3.8	43 109 °F	1.3 (69)		1 mg/m ³ = 0.19 ppm			550 IIA T1
99	Cumene CAS 98-82-8 C ₆ H ₅ CH(CH ₃) ₂	C ₉ H ₁₂	Cumol i-Propyl benzene Isopropyl benzene 2-Phenyl propane	120.2 4.15 r 70 v	0.86	152 306 °F	5.3	31 88 °F	0.8 (40)	0.8 (40)	0.9 (45)	0.9 (45)	0.8 (40)	420 IIA T2
100	Cyclobutane CAS 287-23-0 (CH ₂) ₄	C ₄ H ₈	Tetramethylene	56.1 1.94 r	Gas	12.5 55 °F	Gas	Gas	1.8 (42)	1.8 (42)		1.8 (42)	1.8 (42)	IIA
101	Cyclohexane CAS 110-82-7 (CH ₂) ₆	C ₆ H ₁₂	Hexahydrobenzene Hexamethylene Hexanaphthene Naphthene	84.2 2.91 r 67 v	0.78	81 178 °F	104	-18 0 °F	1.0 (35)	1.0 (35)	1.3 (46)	1.3 (46)	1.2 (42)	260 IIA T3
102	Cyclohexanol CAS 108-93-0 (CH ₂) ₅ CHOH	Anol C ₆ H ₁₂ O	Cyclohexyl alcohol Hexahydrophenol Hydroxycyclohexane Hexalin Hydralin	100.2 3.46 r	0.95	161 322 °F	1	61 142 °F	1.2 (50)	1.2 (50)			1.2 (50)	300 IIA T3
103	Cyclohexanone CAS 108-94-1 (CH ₂) ₅ CO	Anon C ₆ H ₁₀ O	Sextone Hexanone Cyclohexyl ketone Keto-hexamethylene Pimelic ketone	98.1 3.39 r	0.95	156 313 °F	4.5	43 109 °F	1.3 (53)	1.3 (53)	1.1 (45)	1.1 (45)	1.0 (41)	430 IIA T2
104	Cyclohexene CAS 110-83-8 C ₆ H ₁₀	C ₆ H ₁₀	1.2.3.4-Tetrahydrobenzene Hexanaphthylene Benzene tetrahydride	82.1 2.83 r 70 v	0.81	83 181 °F	90	-17 1 °F	1.1 (38)	1.1 (38)		1.2 (41)	1.2 (41)	265 IIA T3

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
95			IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL	
			IR	P 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
96			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	45 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	45 / 100 %LEL	
			IR	P 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
97			EC	Polytron 7000 and 8000 AC	Acid: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
98		50 (264)	IR	PIR 7000 type 334, P 8700 type 334	40 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	55 / 100 %LEL	
			IR	P 5700 type 340	100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
99	20 (100)	50 (250)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL // 2000 ppm Gas-Library	
			IR	P 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL // 1600 ppm Gas-Library	
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
100			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
101	200 (702)	300 (1053)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	8 / 100 %LEL // 600 ppm Gas-Library	PIR 7000 / P 8700 performance approved
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			OP	Polytron Pulsar 2	1 // 4 / 8 LELm	CSF = 0.62 (Propane = 1.00) / LEL = 1.0
102		50 (209)	IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
103	20 (82)	50 (204)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL // 3500 ppm Gas-Library	
			IR	P 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL // 1500 ppm Gas-Library	
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
104		300 (1026)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	P 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
105	Cyclohexene oxide CAS 286-20-4 (CH ₂) ₄ CHCHO	CHO C ₆ H ₁₀ O	1,2-Epoxy cyclohexane Tetramethylene oxirane 7-Oxabicyclo(4.1.0)heptane	98.1 3.39 r 95 v	0.97	130 266 °F	12	24 75 °F	1.5 (61)		1 mg/m ³ = 0.24 ppm			345 IIB T2
106	Cyclohexylamine CAS 108-91-8 (CH ₂) ₅ CHNH ₂	CHA C ₆ H ₁₃ N	Cyclohexane amine Aminocyclohexane Hexahydroaniline Aminohexahydrobenzene	99.2 3.42 r 79 v	0.86	134 273 °F	13	27 81 °F	1.1 (45)	1.1 (45)	1.5 (62)	1.5 (62)	1.1 (45)	275 IIA T3
107	Cyclopentane CAS 287-92-3 (CH ₂) ₅	CP C ₅ H ₁₀	Pentamethylene	70.1 2.42 r 83 v	0.74	49 120 °F	346	<-20 <-4 °F	1.4 (41)	1.4 (41)	1.1 (32)	1.5 (44)	1.4 (41)	320 IIA T2
108	Cyclopentanone CAS 120-92-3 (CH ₂) ₄ CO	C ₅ H ₈ O	Keto pentamethylene Ketocyclopentane Adipic ketone	84.1 2.90 r 88 v	0.95	131 268 °F	11.5	26 79 °F	1.6* (56)		1 mg/m ³ = 0.29 ppm			430 IIA T2
109	Cyclopropane CAS 75-19-4 (CH ₂) ₃	C ₃ H ₆	Trimethylene RC 270	42.1 1.45 r	Gas	-33 -27 °F	Gas	Gas	2.4 (42)	2.4 (42)		2.4 (42)	2.4 (42)	495 IIA T1
110	cis-Decahydronaphthalene CAS 493-01-6 CH(CH ₂) ₈ CH	C ₁₀ H ₁₈	cis-Bicyclo(4.4.0)decane cis-Decaline Perhydronaphthalene cis-Naphthane	138.2 4.77 r	0.90	196 385 °F	1.1	61 142 °F	0.7 (40)	0.7 (40)			0.7 (40)	240 IIA T3
111	Decamethyl cyclopentasiloxane CAS 541-02-6 Si ₅ O ₅ (CH ₃) ₁₀	DMCPS C ₁₀ H ₃₀ O ₅ Si ₅	Cyclomethicone	370.8 12.80 r	0.96	210 410 °F	0.16	77 171 °F	0.7* (108)		1 mg/m ³ = 0.06 ppm			390 T2
112	n-Decane CAS 124-18-5 C ₁₀ H ₂₂	C ₁₀ H ₂₂		142.3 4.91 r	0.73	174 345 °F	1.7	46 115 °F	0.7 (42)	0.7 (42)		0.8 (47)	0.7 (42)	200 IIA T4
113	1-Decene CAS 872-05-9 C ₁₀ H ₂₀	C ₁₀ H ₂₀	n-Decylene	140.3 4.84 r	0.74	172 342 °F	2	<55 <131 °F		0.55 (32)		0.5 (29)		235 T3
114	Desflurane CAS 57041-67-5 CHF ₂ -O-CHFCF ₃	C ₃ H ₂ F ₆ O	Tetrafluoroethyl difluoromethyl ether 2-Difluoromethoxy tetrafluoroethane Suprane	168.0 5.80 r	1.47	23.5 74 °F	885	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
115	Deuterium CAS 7782-39-0 D ₂	2D D ₂	Heavy Hydrogen Diplogen Dideuterium	4.0 0.14 r	Gas	-250 -418 °F	Gas	Gas	6.7 (11)			5.0 (8.3)		560 T1
116	Diacetone alcohol CAS 123-42-2 CH ₃ COCH ₂ COH(CH ₃) ₂	C ₆ H ₁₂ O ₂	4-Hydroxy-4-methyl-2-pentanone 2-Methyl-2-pentanol-4-one 4-Hydroxy-2-keto-4-methylpentane	116.2 4.01 r	0.93	166 331 °F	1	58 136 °F	1.3 (63)	1.8 (87)	1.8 (87)	1.8 (87)	1.8 (87)	515 IIB T1

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
105			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	P 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
106	2 (8.3)	10 (41)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
107		600 (1753)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 2100 ppm Gas-Library	
			IR	P 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 700 ppm Gas-Library	
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			OP	Polytron Pulsar 2	1 // 4 / 8 LELm	CSF = 0.65 (Propane = 1.00) / LEL = 1.4
108			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
109			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
110			IR	PIR 7000 type 334, P 8700 type 334	60 / 100 %LEL (&)	
			IR	P 5700 type 334	100 %LEL (&)	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
111			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	25 / 100 %LEL	
			IR	P 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
112			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL // 1750 ppm Gas-Library	
			IR	P 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL // 350 ppm Gas-Library	
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
113			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (\$)	
			IR	P 5700 type 334	100 %LEL (\$)	
114			PY	Pyrolyzer Polytron 7500 PFC	20 ppm / LDL = 0.5 ppm	S = 1.3
115			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
116	20 (97)	50 (242)	IR	PIR 7000 type 334, P 8700 type 334	40 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
117	Di-i-amyl ether CAS 544-01-4 (CH ₃) ₂ CH(CH ₂) ₂ O	C ₁₀ H ₂₂ O	Diisoamyl ether Isoamyl ether Di-i-pentyl ether Diisopentyl ether Isopentyl ether 1.1'-Oxybis(3-methyl-butane) Di-3-methylbutyl ether	158.3 5.46 r	0.78	173 343 °F	1.49	45 113 °F	0.6 (40)		1 mg/m ³ = 0.15 ppm			
118	Diborane CAS 19287-45-7 B ₂ H ₆	H ₆ B ₂	Boron hydride Boroethane Diboron hexahydride	27.7 0.96 r	Gas	-93 -135 °F	Gas	Gas	0.8 (9.2)		1 mg/m ³ = 0.87 ppm	0.8 (9.2)		
119	Dibutylamine CAS 111-92-2 (C ₄ H ₉) ₂ NH	DnBA C ₈ H ₁₉ N	Di-n-butylamine N-Butyl-1-butanamine	129.2 4.46 r	0.76	161 322 °F	2.7	42 108 °F			1 mg/m ³ = 0.19 ppm	1.1 (59)		260 IIA T3
120	Di-n-butylether CAS 142-96-1 (C ₄ H ₉) ₂ O	C ₈ H ₁₈ O	1-Butoxybutane 1.1'-Oxybisbutane Dibutylether Butyl ether	130.2 4.49 r 95 v	0.77	141 286 °F	6.4	25 77 °F	0.9 (49)	0.9 (49)	1 mg/m ³ = 0.18 ppm	1.5 (81)	0.9 (49)	175 IIB T4
121	Di-tert-butyl peroxide CAS 110-05-4 (CH ₃) ₃ COOC(CH ₃) ₃	DTBP C ₈ H ₁₈ O ₂	Bis(1.1-dimethylethyl)peroxide	146.2 5.05 r 81 v	0.79	110 230 °F	26	4 39 °F	0.7 (43)	0.74 (45)	1 mg/m ³ = 0.16 ppm		1.0 (61)	170 IIB T4
122	1,2-Dichlorobenzene CAS 95-50-1 C ₆ H ₄ Cl ₂	ODCB C ₆ H ₄ Cl ₂	ortho-Dichlorobenzene o-Dichlorobenzol	147.0 5.07 r	1.32	179 354 °F	1.33	66 151 °F	1.7 (104)		2.2 (135)	2.2 (135)	2.2 (135)	640 IIA T1
123	1,1-Dichloroethane CAS 75-34-3 CH ₃ CHCl ₂	C ₂ H ₄ Cl ₂	Ethylidene chloride R150a	99.0 3.42 r 296 v	1.17	57 135 °F	243	-10 14 °F	5.6 (231)	5.6 (231)	5.4 (223)	5.4 (223)	5.6 (231)	440 IIA T2
124	1,2-Dichloroethane CAS 107-06-2 ClCH ₂ CH ₂ Cl	EDC C ₂ H ₄ Cl ₂	Ethylene chloride Ethylene dichloride Ethane dichloride R150	99.0 3.42 r 208 v	1.25	84 183 °F	87	13 55 °F	4.2 (173)	6.2 (256)	6.2 (256)	6.2 (256)	6.2 (256)	440 IIA T2
125	1,1-Dichloroethylene CAS 75-35-4 CH ₂ =CCl ₂	VDC C ₂ H ₂ Cl ₂	1,1-Dichloroethene Vinylidene chloride R1130a	96.9 3.34 r 314 v	1.25	32 90 °F	660	-25 -13 °F	6.5 (262)	6.5 (262)	6.5 (262)	6.5 (262)	5.6 (226)	530 IIA T1
126	1,2-Dichloroethylene cis CAS 156-59-2 CHCl=CHCl	C ₂ H ₂ Cl ₂	1,2-Dichloroethene cis Dioform cis	96.9 3.34 r 293 v	1.28	60.3 141 °F	216	6 43 °F	6.2 (250)		1 mg/m ³ = 0.25 ppm	5.6 (226)		460 IIA T1
127	1,2-Dichloroethylene trans CAS 156-60-5 CHCl=CHCl	C ₂ H ₂ Cl ₂	1,2-Dichloroethene trans Dioform trans R1130	96.9 3.34 r 293 v	1.26	48 118 °F	361	-6 21 °F	6.1 (246)		1 mg/m ³ = 0.25 ppm		5.6 (226)	440 IIA T2

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
117			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
118		0.1 (0.12)	EC	Polytron 7000 and 8000 Hydride	B2H6: 0.5 / 1 / 1 ppm / LDL = 0.05 ppm	
			EC	Polytron 7000 and 8000 Hydride SC	B2H6: 0.3 / 1 / 5 ppm / LDL = 0.02 ppm	
			EC	Polytron 3000 B2H6	0.5 ppm	
119	5 (27)		IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
120			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (\$)	
			IR	P 5700 type 334	100 %LEL (\$)	
121			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
122	10 (61)	50c (306)	IR	PIR 7000 type 334, P 8700 type 334	80 / 100 %LEL (&)	
			IR	P 5700 type 334	100 %LEL (&)	
123	100 (413)	100 (413)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (\$)	
			IR	P 5700 type 334	100 %LEL (\$)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
124		50 (206)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	40 / 100 %LEL // 15500 ppm Gas-Library	PIR 7000 / P 8700 performance approved
			IR	P 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	40 / 100 %LEL // 15500 ppm Gas-Library	PIR 7000 / P 8700 performance approved
			IR	P 5700 type 340	50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (\$)	
			PY	Pyrolyzer Polytron 7500 PFC	30 ppm / LDL = 0.5 ppm	S = 0.8
125	2 (8.1)		CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			PY	Pyrolyzer Polytron 7500 PFC	50 ppm / LDL = 2 ppm	S = 0.5
126		200 (808)	PY	Pyrolyzer Polytron 7500 PFC	30 ppm / LDL = 0.5 ppm	S = 0.8
127		200 (808)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	50 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			PY	Pyrolyzer Polytron 7500 PFC	30 ppm / LDL = 0.5 ppm	S = 0.8

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
128	1,1-Dichloro-1-fluoroethane CAS 1717-00-6 CCl ₂ FCH ₃	C ₂ H ₃ Cl ₂ F	R141b HCFC 141b	117.0 4.04 r	1.27	32 90 °F	648		5.6* (273)		1 mg/m ³ = 0.21 ppm			
129	Dichloromethane CAS 75-09-2 CH ₂ Cl ₂	DCM CH ₂ Cl ₂	Methylene chloride Methylene dichloride R30	84.9 2.93 r 518 v	1.33	40 104 °F	470	n. a.	13.0 (460)		13.0 (460)	13.0 (460)		605 IIA T1
130	1,2-Dichloropropane CAS 78-87-5 CH ₃ CH(Cl)CH ₂ Cl	PDC C ₃ H ₆ Cl ₂	1,2-Propylene dichloride R270	113.0 3.90 r 188 v	1.16	96 205 °F	51	15 59 °F	3.1 (146)	3.4 (160)	3.4 (160)	3.4 (160)	3.4 (160)	555 IIA T1
131	1,3-Dichloro-2-propanol CAS 96-23-1 (CH ₂ Cl) ₂ CHOH	1,3-DCP C ₃ H ₆ Cl ₂ O	1,3-Dichlorohydrin 1,3-Dichloro-i-propanol 1,3-Dichloroisopropyl alcohol 1,3-Dichloro-2-hydroxypropane	129.0 4.45 r	1.36	175 347 °F	0.72	74 165 °F			1 mg/m ³ = 0.19 ppm			IIA
132	1,3-Dichloropropene CAS 542-75-6 ClCH ₂ CH=CHCl	DCP C ₃ H ₄ Cl ₂	Telone 3-Chloroallyl chloride 1,3-Dichloropropylene	111.0 3.83 r 298 v	1.23	108 226 °F	37	27 81 °F	5.3 (245)		5.3 (245)	5.3 (245)		IIA
133	Dichlorosilane CAS 4109-96-0 SiH ₂ Cl ₂	DCS H ₂ Cl ₂ Si	Silicon dichloride	101.0 3.49 r	Gas	8 46 °F	Gas	Gas	2.5 (105)			4.1 (173)		185 T4
134	1,2-Dichlorotetrafluoroethane CAS 76-14-2 C ₂ Cl ₂ F ₄	C ₂ Cl ₂ F ₄	Cryofluorane R114	170.9 5.90 r	Gas	3.6 38 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
135	2,2-Dichloro-1,1,1-trifluoroethane CAS 306-83-2 CHCl ₂ CF ₃	C ₂ HCl ₂ F ₃	R123	152.9 5.28 r	1.48	28.7 84 °F	914	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
136	Dicyclohexyl CAS 92-51-3 (C ₆ H ₁₁) ₂	C ₁₂ H ₂₂	Bicyclohexyl Cyclohexyl cyclohexane	166.3 5.74 r	0.86	227 441 °F		74 165 °F	0.6 (42)			0.7 (49)		240 IIA T3
137	1,3-Dicyclopentadiene CAS 77-73-6 C ₁₀ H ₁₂	C ₁₀ H ₁₂	4,7-Methylentetrahydro indene Cyclopentadiene dimer Tetrahydro-4,7-methanoindene	132.2 4.56 r	0.94	166 331 °F	3	39 102 °F		0.8 (44)	0.8 (44)	0.8 (44)	0.8 (44)	500 IIA T1
138	1,1-Diethoxyethane CAS 105-57-7 CH ₃ CH(OC ₂ H ₅) ₂	C ₆ H ₁₄ O ₂	Acetal Diethylacetal Acetaldehyde diethyl acetal Ethylidene diethyl ether	118.2 4.08 r 144 v	0.82	102 216 °F	35	13 55 °F	1.6 (79)			1.6 (79)		230 T3

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
128			IR	PIR 7000 type 334, P 8700 type 334	40 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	80 / 100 %LEL (&)	
			IR	P 5700 type 340	100 %LEL (&)	
			PY	Pyrolyzer Polytron 7500 PFC	20 ppm / LDL = 0.5 ppm	S = 1.3
129	75 (265)	25 (88)	IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL // 39000 ppm Gas-Library	PIR 7000 / P 8700 performance approved
			IR	P 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	50 / 100 %LEL // 65000 ppm Gas-Library	PIR 7000 / P 8700 performance approved
			IR	P 5700 type 340	50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			PY	Pyrolyzer Polytron 7500 PFC	30 ppm / LDL = 0.5 ppm	S = 1.0
130		75 (353)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL // 9300 ppm Gas-Library	PIR 7000 / P 8700 performance approved
			IR	P 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	30 / 100 %LEL // 9300 ppm Gas-Library	PIR 7000 / P 8700 performance approved
			IR	P 5700 type 340	50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
131			IR	PIR 7000 type 334, P 8700 type 334	55 / 100 %LEL	
			IR	P 5700 type 334	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL (&)	
			IR	P 5700 type 340	20 + 50 + 100 %LEL (&)	
			PY	Pyrolyzer Polytron 7500 PFC	150 ppm / LDL = 5 ppm	S = 0.2
132		1 (4.6)	IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL // 15900 ppm Gas-Library	PIR 7000 / P 8700 performance approved
			IR	P 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	40 / 100 %LEL // 21200 ppm Gas-Library	PIR 7000 / P 8700 performance approved
			IR	P 5700 type 340	50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
			PY	Pyrolyzer Polytron 7500 PFC	50 ppm / LDL = 1 ppm	S = 1.0
133			EC	Polytron 7000 and 8000 AC	DCS: 3 / 10 / 30 ppm / LDL = 0.5 ppm	Check sensor after prolonged exposure
			EC	Polytron 7000 and 8000 HCl	DCS: 5 / 10 / 20 ppm / LDL = 0.2 ppm	
134	1000 (7121)	1000 (7121)	PY	Pyrolyzer Polytron 7500 PFC	20 ppm / 0.5 ppm	S = 1.7
135			PY	Pyrolyzer Polytron 7500 PFC	30 ppm / LDL = 0.5 ppm	S = 0.9
136			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
137	0.5 (2.8)	5 (28)	IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	P 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
138			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
139	Diethoxy methyl silane CAS 2031-62-1 (C ₂ H ₅ O) ₂ SiHCH ₃	DEMS C ₆ H ₁₄ O ₂ Si	Methyl diethoxy silane Methylhydrogen diethoxy silane	134.3 4.64 r	0.84	94 201 °F								
											1 mg/m ³ = 0.18 ppm			
140	Diethylamine CAS 109-89-7 (C ₂ H ₅) ₂ NH	DEA C ₄ H ₁₁ N	N-Ethylethane amine N.N-Diethylamine	73.1 2.52 r 111 v	0.70	56 133 °F	256	<-20 <-4 °F	1.7 (52)	1.7 (52)	1.8 (55)	1.8 (55)	1.7 (52)	310 IIA T2
											1 mg/m ³ = 0.33 ppm			
141	1,2-Diethylbenzene CAS 135-01-3 C ₆ H ₄ (C ₂ H ₅) ₂	C ₁₀ H ₁₄	o-Diethylbenzene	134.2 4.63 r	0.88	183 361 °F	1.1	55 131 °F	0.8* (45)					380 IIA T2
											1 mg/m ³ = 0.18 ppm			
142	Diethyl carbonate CAS 105-58-8 CO(OC ₂ H ₅) ₂	DEC C ₆ H ₁₀ O ₃	Diethoxy formic acid anhydride Carbonic acid diethyl ester	118.1 4.08 r 106 v	0.97	126 259 °F	11	25 77 °F	1.4 (69)	1.4 (69)			1.4 (69)	445 IIB T2
											1 mg/m ³ = 0.20 ppm			
143	Diethylene glycol diethylether CAS 112-36-7 (C ₂ H ₅ OC ₂ H ₄) ₂ O	DEGDDE C ₈ H ₁₈ O ₃	Diethyldiglycol Bis(2-ethoxyethyl)-ether Diethylcarbitol Ethyl diglyme 1,1'-Oxybis(2-ethoxy-ethane) 3,6,9-Trioxa undecane	162.2 5.60 r	0.91	189 372 °F	0.8		0.9** (61)					
											1 mg/m ³ = 0.15 ppm			
144	Diethyleneglycol dimethylether CAS 111-96-6 CH ₃ OC ₂ H ₄ OC ₂ H ₄ OCH ₃	DEGDME C ₆ H ₁₄ O ₃	Bis(2-methoxyethyl)-ether Dimethyl diglycol Diglyme Dimethyl carbitol 1,1'-Oxybis(2-methoxy-ethane)	134.2 4.63 r	0.94	160 320 °F	2.2	51 124 °F	1.3 (73)					190 T4
											1 mg/m ³ = 0.18 ppm			
145	N,N-Diethylethanolamine CAS 100-37-8 (C ₂ H ₅) ₂ NC ₂ H ₄ OH	C ₆ H ₁₅ NO	2-Diethylaminoethanol 2-Hydroxy triethylamine 2-Diethylaminoethyl alcohol	117.2 4.05 r	0.88	161 322 °F	1.9	51.5 125 °F	1.8 (88)		6.7 (327)	6.7 (327)		320 IIA T2
											1 mg/m ³ = 0.20 ppm			
146	Diethyl ether CAS 60-29-7 (C ₂ H ₅) ₂ O	C ₄ H ₁₀ O	Ethoxy ethane 1,1'-Oxybisethane Diethyl oxide Ethyl ether R610	74.1 2.56 r 111 v	0.71	35 95 °F	586	<-20 <-4 °F	1.7 (52)	1.7 (52)	1.9 (59)	1.9 (59)	1.7 (52)	175 IIB T4
											1 mg/m ³ = 0.32 ppm			
147	Diethyl ketone CAS 96-22-0 (C ₂ H ₅) ₂ CO	DEK C ₆ H ₁₀ O	3-Pentanone Pentan-3-one Amylketone Dimethylacetone Methacetone Propione	86.1 2.97 r	0.81	102 216 °F	36	7 45 °F		1.6 (57)	1.6 (57)	1.6 (57)	1.6 (57)	455 IIB T1
											1 mg/m ³ = 0.28 ppm			
148	Diethylsulfide CAS 352-93-2 (C ₂ H ₅) ₂ S	C ₄ H ₁₀ S	Diethyl thioether 1,1'-Thiobisethane 3-Thiapentane	90.2 3.11 r	0.84	92 198 °F	66	-10 14 °F	1.0* (38)					
											1 mg/m ³ = 0.27 ppm			

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
139			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
140	5 (15)	25 (76)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	P 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and 8000 NH3 LC	DEA: 100 ppm / LDL = 5 ppm	
141			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
142			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
143			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	S = 1.5 (L)
			IR	P 5700 type 340	100 %LEL (?)	
			EC	Polytron 7000 and 8000 OV1	as MeOH (20 / 50 / 200 ppm)	
144	5 (28)		IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
145	5 (24)	10 (49)	IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	S = 0.5 (L)
			IR	P 5700 type 340	100 %LEL (?)	
			EC	Polytron 7000 and 8000 NH3 LC	as NH3 x 2 (50 / 100 ppm x 2)	
146	400 (1235)	400 (1235)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	SE Ex / PEX 3000 / P 8200 performance approved
			IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL // 2550 ppm Gas-Library	
			IR	P 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL // 850 ppm Gas-Library	
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and 8000 OV1	Et2O: 50 / 50 / 200 ppm / LDL = 5 ppm	S = 0.4
147		200 (718)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (\$)	
			IR	P 5700 type 334	100 %LEL (\$)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
148			EC	Polytron 7000 and 8000 H2S LC	as THT (20 / 50 / 100 ppm)	S = 0.3

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
149	1,1-Difluoroethane CAS 75-37-6 CHF ₂ CH ₃	C ₂ H ₄ F ₂	Ethylidene fluoride R152a	66.1 2.28 r	Gas	-25 -13 °F	Gas	Gas	4.0 (110)		1 mg/m ³ = 0.36 ppm			455 IIA T1
150	Difluoromethane CAS 75-10-5 CH ₂ F ₂	CH ₂ F ₂	Methylene fluoride R32	52.0 1.79 r	Gas	-51.7 -61 °F	Gas	Gas	13.1 (284)		1 mg/m ³ = 0.46 ppm			648 T1
151	1,2-Dimethoxyethane CAS 110-71-4 (CH ₃ OCH ₂) ₂	EGDME C ₄ H ₁₀ O ₂	Ethylene glycol dimethyl ether Dimethylglycol Monoglyme 2,5-Dioxahexane Glycol dimethylether	90.1 3.11 r 103 v	0.87	84 183 °F	78	-2 28 °F	1.6 (60)	1.6 (60)	1 mg/m ³ = 0.27 ppm		1.6 (60)	197 IIB T4
152	Dimethoxymethane CAS 109-87-5 CH ₂ (OCH ₃) ₂	Formal C ₃ H ₈ O ₂	Methylal Formaldehyde dimethylacetal Methylene glycol dimethyl ether Formal	76.1 2.63 r 121 v	0.86	42 108 °F	426	-31 -24 °F	2.2 (70)	2.2 (70)	2.2 (70)	1.6 (51)	2.5 (79)	235 IIB T3
153	2,2-Dimethoxypropane CAS 77-76-9 (CH ₃) ₂ C(OCH ₃) ₂	C ₅ H ₁₂ O ₂	Acetone dimethylacetal Dimethyl dimethoxy methane	104.2 3.60 r	0.85	83 181 °F	66	-11 12 °F	6.0* (261)		1 mg/m ³ = 0.23 ppm			
154	N,N-Dimethyl acetamide CAS 127-19-5 (CH ₃) ₂ NCOCH ₃	DMAC C ₄ H ₉ NO	Acetic acid dimethyl amide Acetyl dimethylamine N,N-Dimethyl methanamide	87.1 3.01 r	0.94	165 329 °F	3.3	66 151 °F	1.8 (65)		1.8 (65)			IIA
155	Dimethylamine CAS 124-40-3 (CH ₃) ₂ NH	DMA C ₂ H ₇ N	N-Methylmethanamine	45.1 1.56 r	Gas	7 45 °F	Gas	Gas	2.8 (53)	2.8 (53)	2.8 (53)	2.8 (53)	2.8 (53)	400 IIA T2
156	2-Dimethylaminoethanol CAS 108-01-0 (CH ₃) ₂ NC ₂ H ₄ OH	C ₄ H ₁₁ NO	N,N-Dimethylethanolamine N,N-Dimethyl-2-hydroxyethylamine	89.1 3.08 r	0.89	131 268 °F	5.6	31 88 °F			1.6 (59)			220 IIA T3
157	Dimethylaminopropylamine CAS 109-55-7 (CH ₃) ₂ N(CH ₂) ₃ NH ₂	DMAPA C ₅ H ₁₄ N ₂	N,N-Dimethyl-1,3-diaminopropane 3-Aminopropyl dimethylamine N,N-Dimethyl-1,3-propanediamine 1-Amino-3-dimethylaminopropane	102.2 3.53 r	0.81	134 273 °F	6	35 95 °F	1.9 (81)	1.2 (51)	1 mg/m ³ = 0.23 ppm		1.2 (51)	219 IIA T3

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
149			IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL	
			IR	P 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	25 / 100 %LEL	
			IR	P 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
150			IR	PIR 7000 type 334, P 8700 type 334	5 / 100 %LEL	
			IR	P 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			PY	Pyrolyzer Polytron 7500 PFC	DFM: 100 / 100 ppm / LDL = 2 ppm	
151			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	P 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
152	1000 (3171)	1000 (3171)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	P 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
153			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
154	10 (36)	10 (36)	IR	PIR 7000 type 334, P 8700 type 334	55 / 100 %LEL	
			IR	P 5700 type 334	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	35 / 100 %LEL	
			IR	P 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
155	2 (3.8)	10 (19)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and 8000 NH3 LC	DMA: 100 ppm / LDL = 5 ppm	
156			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
157			IR	PIR 7000 type 334, P 8700 type 334	50 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
158	2,2-Dimethylbutane CAS 75-83-2 (CH ₃) ₃ CCH ₂ CH ₃	C ₆ H ₁₄	Neohexane	86.2 2.98 r 101 v	0.64 122 °F 1 ppm = 3.59 mg/m ³	50	348	<-20 <-4 °F	1.2 (43)	1.0 (36)	1.2 (43)		435 IIA T2	
159	2,3-Dimethylbutane CAS 79-29-8 (CH ₃) ₂ CHCH(CH ₃) ₂	C ₆ H ₁₄	Di-i-propyl	86.2 2.98 r 98 v	0.66 136 °F 1 ppm = 3.59 mg/m ³	58	255	<-20 <-4 °F	1.2 (43)	1.0 (36)	1.2 (43)		415 IIA T2	
160	Dimethyl carbonate CAS 616-38-6 CO(OCH ₃) ₂	DMC C ₃ H ₆ O ₃	Dimethoxy formic acid anhydride Carbonic acid dimethyl ester	90.1 3.11 r	1.07 194 °F 1 ppm = 3.75 mg/m ³	90	53	14 57 °F	4.2* (158)		1 mg/m ³ = 0.27 ppm		455 T1	
161	N,N-Dimethyl cyclohexyl amine CAS 98-94-2 C ₆ H ₁₁ N(CH ₃) ₂	DMCHA C ₈ H ₁₇ N	N-Cyclohexyl dimethyl amine Hexahydro-N,N-dimethyl aniline Dimethylamino cyclohexane	127.2 4.39 r	0.85 161 322 °F 1 ppm = 5.30 mg/m ³	161	3.6	40 104 °F	0.9 (48)		1 mg/m ³ = 0.19 ppm		215 T3	
162	Dimethyl disulfide CAS 624-92-0 (CH ₃) ₂ S ₂	DMDS C ₂ H ₆ S ₂	2,3-Dithiabutane	94.2 3.25 r	1.06 230 °F 1 ppm = 3.93 mg/m ³	110	28	10 50 °F	1.1* (43)		1 mg/m ³ = 0.25 ppm		370 IIA T2	
163	Dimethylether CAS 115-10-6 (CH ₃) ₂ O	DME C ₂ H ₆ O	Methoxy methane Dimethyl oxide 1,1'-Oxybismethane Methyl ether	46.1 1.59 r	Gas -25 -13 °F 1 ppm = 1.92 mg/m ³	-25	Gas	Gas	2.7 (52)	2.7 (52)	3.4 (65)	2.7 (52)	240 IIB T3	
164	Dimethylethylamine CAS 598-56-1 C ₂ H ₅ N(CH ₃) ₂	DMEA C ₄ H ₁₁ N	N-Ethyl dimethylamine N,N-Dimethylethanamine	73.1 2.52 r	0.68 36.5 98 °F 1 ppm = 3.05 mg/m ³	36.5	527	-36 -33 °F	0.9* (27)		1 mg/m ³ = 0.33 ppm		190 T4	
165	Dimethylformamide CAS 68-12-2 HCON(CH ₃) ₂	DMF C ₃ H ₇ NO	Formic acid dimethylamide N,N-Dimethylformamide N,N-Dimethylmethanamide N-Formyldimethylamine	73.1 2.52 r	0.95 153 307 °F 1 ppm = 3.05 mg/m ³	153	3.8	58 136 °F	2.2 (67)	1.8 (55)	2.2 (67)	2.2 (67)	1.8 (55)	440 IIA T2
166	3,4-Dimethyl hexane CAS 583-48-2 (C ₂ H ₅ CHCH ₃) ₂	C ₈ H ₁₈	i-Octane Isooctane	114.2 3.94 r 79 v	0.72 118 244 °F 1 ppm = 4.76 mg/m ³	118	22	2 36 °F	0.8 (38)	0.8 (38)		0.8 (38)	305 IIA T2	

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
158	500 (1796)		CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	P 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
159	500 (1796)		CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	P 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
160			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
161			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
162			IR	PIR 7000 type 334, P 8700 type 334	60 / 100 %LEL	
			IR	P 5700 type 334	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	40 / 100 %LEL	
			IR	P 5700 type 340	50 + 100 %LEL	
			EC	Polytron 7000 and 8000 H2S LC	DMDS: 20 / 50 / 100 ppm / LDL = 1 ppm	
163	1000 (1921)		CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	SE Ex / PEX 3000 / P 8200 performance approved
			IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL // 4050 ppm Gas-Library	
			IR	P 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL // 1350 ppm Gas-Library	
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
164			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (\$)	
			IR	P 5700 type 334	100 %LEL (\$)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and 8000 NH3 LC	DMEA: 100 ppm / LDL = 5 ppm	
165	5 (15)	10 (30)	IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL // 5400 ppm Gas-Library	
			IR	P 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 1800 ppm Gas-Library	
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
166	500 (2379)		CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	P 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
167	1,1-Dimethylhydrazine CAS 57-14-7 (CH ₃) ₂ N-NH ₂	UDMH C ₂ H ₈ N ₂	N,N-Dimethylhydrazine Dimazine unsym-Dimethylhydrazine	60.1 2.07 r 96 v	0.78 145 °F 1 ppm = 2.50 mg/m ³	63 145 °F	145	-18 0 °F	2.0 (50)	2.4 (60)	2.0 (50)	2.0 (50)	2.4 (60)	240 IIB T3
168	2,3-Dimethylpentane CAS 565-59-3 C ₂ H ₅ CH(CH ₃)CH(CH ₃) ₂	C ₇ H ₁₆	i-Heptane Isoheptane	100.2 3.46 r 98 v	0.70 194 °F 1 ppm = 4.18 mg/m ³	90 194 °F	72	-12 10 °F	1.1 (46)			1.1 (46)		330 IIA T2
169	2,2-Dimethyl propane CAS 463-82-1 C(CH ₃) ₄	C ₅ H ₁₂	Neopentane Tetramethyl methane tert-Butyl methane tert-Pentane	72.2 2.49 r	Gas 50 °F 1 ppm = 3.01 mg/m ³	10 50 °F	Gas	Gas	1.3 (39)			1.4 (42)		450 IIA T2
170	N,N-Dimethyl-i-propanolamine CAS 108-16-7 (CH ₃) ₂ NCH ₂ CH(OH)CH ₃	C ₆ H ₁₃ NO	1-Dimethylaminopropan-2-ol	103.2 3.56 r	0.86 259 °F 1 ppm = 4.30 mg/m ³	126 259 °F	18	35 95 °F	2.7* (116)					1 mg/m ³ = 0.23 ppm IIA
171	N,N-Dimethyl-i-propylamine CAS 996-35-0 (CH ₃) ₂ CHN(CH ₃) ₂	DMIPA C ₆ H ₁₃ N	1-Dimethyl aminopropane N,N-Dimethyl-1-propane amine	87.2 3.01 r 83 v	0.72 151 °F 1 ppm = 3.63 mg/m ³	66 151 °F	170	<-20 <-4 °F	1.1 (40)					1 mg/m ³ = 0.28 ppm IIA
172	N,N-Dimethyl-n-propyl amine CAS 926-63-6 (CH ₃) ₂ NC ₃ H ₇	DMPA C ₆ H ₁₃ N	N,N-Dimethyl-1-propanamine Dimethylpropylamine	87.2 3.01 r 98 v	0.72 149 °F 1 ppm = 3.63 mg/m ³	65 149 °F	173	<-20 <-4 °F	1.3 (47)					1 mg/m ³ = 0.28 ppm IIA
173	Dimethyl sulfide CAS 75-18-3 (CH ₃) ₂ S	DMS C ₂ H ₆ S	2-Thiapropane Thiobismethane Methyl thiomethane	62.1 2.14 r 100 v	0.85 99 °F 1 ppm = 2.59 mg/m ³	37 99 °F	527	<-20 <-4 °F	2.2 (57)			2.2 (57)		215 IIA T3
174	1,4-Dioxane CAS 123-91-1 (CH ₂) ₄ O ₂	C ₄ H ₈ O ₂	Diethylene dioxide Diethylene ether 1,4-Dioxa cyclohexane p-Dioxane	88.1 3.04 r 75 v	1.03 214 °F 1 ppm = 3.67 mg/m ³	101 214 °F	38	11 52 °F	1.4 (51)	1.4 (51)	2.0 (73)	2.0 (73)	1.9 (70)	375 IIB T2
175	1,3-Dioxolane CAS 646-06-0 (CH ₂) ₃ O ₂	C ₃ H ₆ O ₂	1,3-Dioxa cyclopentane Formaldehyde ethylene acetal Dihydro-1,3-dioxol	74.1 2.56 r 100 v	1.06 165 °F 1 ppm = 3.09 mg/m ³	74 165 °F	114	-5 23 °F	2.3 (71)	2.3 (71)			2.3 (71)	245 IIB T3

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
167		0.5 (1.3)	IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (\$)	
			IR	P 5700 type 334	100 %LEL (\$)	
			EC	Polytron 7000 and 8000 N2H4	UDMH: 1 / 1 / 3 ppm / LDL = 0.02 ppm	
168	500 (2088)		CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	P 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
169	1000 (3008)		CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	P 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
170			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
171	1 (3.6)		CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	P 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and 8000 NH3 LC	as NH3 x 2 (50 / 100 ppm x 2)	S = 0.5 (L)
172			IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL	
			IR	P 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
173			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
			EC	Polytron 7000 and 8000 H2S LC	DMS: 20 / 50 / 100 ppm / LDL = 1 ppm	
174	20 (73)	100 (367)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL // 3500 ppm Gas-Library	
			IR	P 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	8 / 100 %LEL // 1120 ppm Gas-Library	
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
175	100 (309)		CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL	
			IR	P 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and 8000 OV1	as EO x 0.5 (20 / 50 / 200 ppm x 0.5)	S = 2.0 (L)

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
176	Di-i-propylamine CAS 108-18-9 (CH ₃) ₂ CH) ₂ NH	DIPA C ₆ H ₁₅ N	Diisopropylamine 1-Methylethyl-2-propanamine	101.2 3.49 r 105 v	0.72	82 180 °F	85	-7 19 °F	1.2 (51)	1.2 (51)	1.1 (46)	1.1 (46)	1.2 (51)	285 IIA T3
177	Dipropylamine CAS 142-84-7 (C ₃ H ₇) ₂ NH	C ₆ H ₁₅ N	Di-n-propylamine N-Propyl-1-propane amine	101.2 3.49 r 102 v	0.74	105 221 °F	38	7 45 °F	1.2 (51)	1.2 (51)			1.1 (46)	260 IIA T3
178	Dipropylene glycol dimethyl ether CAS 111109-77-4 CH ₃ O(CH ₂) ₃ O(CH ₂) ₃ OCH ₃	DPDME C ₈ H ₁₈ O ₃	Oxybis(methoxypropane) Dimethoxy dipropylene glycol Bis(methoxypropyl)ether	162.2 5.60 r	0.90	175 347 °F	0.74	65 149 °F	0.7 (47)		1 mg/m ³ = 0.15 ppm			165 IIB T4
179	Di-i-propyl ether CAS 108-20-3 (CH ₃) ₂ CHOCH(CH ₃) ₂	C ₆ H ₁₄ O	Diisopropylether 2-Isopropoxy propane 2,2'-Oxybispropane Isopropyl ether Diisopropyl oxide	102.2 3.53 r 89 v	0.72	69 156 °F	175	<-20 <-4 °F	1.0 (43)	1.0 (43)	1.4 (60)	1.4 (60)	1.0 (43)	405 IIA T2
180	Di-n-propyl ether CAS 111-43-3 (C ₃ H ₇) ₂ O	C ₆ H ₁₄ O	Dipropyl ether 1-Propoxypropane 1,1'-Oxybispropane	102.2 3.53 r 102 v	0.75	90 194 °F	73	-18 0 °F	1.2 (51)	1.18 (50)		1.3 (55)		175 IIA T4
181	Disilane CAS 1590-87-0 Si ₂ H ₆	DS H ₆ Si ₂	Silicon hexahydride Silico ethane	62.2 2.15 r	Gas	-14 7 °F	Gas		1.0* (26)		1 mg/m ³ = 0.39 ppm			
182	Divinyl benzene CAS 1321-74-0 C ₆ H ₄ (CH=CH ₂) ₂	DVB C ₁₀ H ₁₀	Diethenyl benzene Vinylstyrene	130.2 4.49 r	0.91	195 383 °F	0.9	64 147 °F			1.1 (60)	0.7 (38)		
183	Divinylether CAS 109-93-3 (CH ₂ =CH) ₂ O	DVE C ₄ H ₆ O	Divinyl oxide Vinylether 1,1'-Oxybisethene Ethenyloxyethene	70.1 2.42 r 97 v	0.77	28 82 °F	737	<-20 <-4 °F	1.7 (50)			1.7 (50)		360 IIB T2
184	n-Dodecane CAS 112-40-3 C ₁₂ H ₂₆	C ₁₂ H ₂₆	Dihexyl	170.3 5.88 r	0.75	216 421 °F	0.12	80 176 °F	0.6 (43)			0.6 (43)		200 IIA T4
185	Enflurane CAS 13838-16-9 CHF ₂ -O-CF ₂ -CHFCI	C ₃ H ₂ ClF ₅ O	Ethrane Chlorotrifluoroethyl difluoromethyl ether 2-Chloro difluoromethoxytrifluoroethane	184.5 6.37 r	1.52	56.5 134 °F	233	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
186	Epichlorohydrin CAS 106-89-8 CH ₂ ClCH ₂ O	ECH C ₃ H ₅ ClO	1-Chloro-2,3-epoxypropane 2,3-Epoxypropylchloride Chloromethyl oxirane 2-Chloropropylene oxide	92.5 3.19 r 112 v	1.18	116 241 °F	16.3	28 82 °F	2.3 (89)	2.3 (89)	3.8 (146)	3.8 (146)	2.3 (89)	385 IIB T2
187	1,2-Epoxybutane CAS 106-88-7 C ₄ H ₈ O	C ₄ H ₈ O	Butylene oxide Ethyl oxirane 1,2-Butylen oxide	72.1 2.49 r 81 v	0.83	65 149 °F	177	-15 5 °F	1.5 (45)			1.7 (51)		370 T2

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
176		5 (21)	CT IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 340, P 8700 type 340 P 5700 type 340	100 %LEL 100 %LEL (?) 100 %LEL (?)	
177			CT IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 340, P 8700 type 340 P 5700 type 340	100 %LEL 100 %LEL (?) 100 %LEL (?)	corrosive/sensor poison
178			IR IR IR IR	PIR 7000 type 334, P 8700 type 334 P 5700 type 334 PIR 7000 type 340, P 8700 type 340 P 5700 type 340	100 %LEL (?) 100 %LEL (?) 100 %LEL (\$) 100 %LEL (\$)	
179	200 (862)	500 (2129)	CT IR IR IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 P 5700 type 334 PIR 7000 type 340, P 8700 type 340 P 5700 type 340 PIR 3000, P 5310, P 8310	10 // 100 %LEL 20 / 100 %LEL 20 + 50 + 100 %LEL 10 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL (?)	
180			CT IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 340, P 8700 type 340 P 5700 type 340	100 %LEL 100 %LEL (?) 100 %LEL (?)	
181			EC	Polytron 7000 and 8000 Hydride	DS: 5 / 20 / 20 ppm / LDL = 0.3 ppm	
182		10 (64)	IR	PIR 7000 type 334, P 8700 type 334	25 / 25 %LEL	only for concentrations < 25 %LEL
183			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	polymerizing - sensor poison
184			IR IR	PIR 7000 type 340, P 8700 type 340 P 5700 type 340	100 %LEL (?) 100 %LEL (?)	
185	20 (154)	2c (15)	PY	Pyrolyzer Polytron 7500 PFC	10 ppm / LDL = 0.2 ppm	S = 2.2
186	0.6 (2.3)	5 (19)	CT IR IR IR IR EC	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 P 5700 type 334 PIR 7000 type 340, P 8700 type 340 P 5700 type 340 PIR 3000, P 5310, P 8310 Polytron 7000 and 8000 OV2	100 %LEL 30 / 100 %LEL // 6900 ppm Gas-Library 50 + 100 %LEL Gas-Library 40 / 100 %LEL // 9200 ppm Gas-Library 50 + 100 %LEL Gas-Library 100 %LEL (?) ECH: 20 / 50 / 100 ppm / LDL = 5 ppm	corrosive/sensor poison PIR 7000 / P 8700 performance approved PIR 7000 / P 8700 performance approved S = 0.45
187			CT IR IR IR IR IR EC	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 P 5700 type 334 PIR 7000 type 340, P 8700 type 340 P 5700 type 340 PIR 3000, P 5310, P 8310 Polytron 7000 and 8000 OV1	100 %LEL 20 / 100 %LEL 20 + 50 + 100 %LEL 15 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL (?) as PO x 2 (20 / 50 / 200 ppm x 2)	S = 0.4 (L)

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
188	Ethane CAS 74-84-0 C ₂ H ₆	C ₂ H ₆	Methylmethane Dimethyl R170	30.1 1.04 r	Gas	-89 -128 °F	Gas	Gas	2.4 (30)	2.4 (30)		3.0 (38)	2.5 (31)	515 IIA T1
						1 ppm = 1.25 mg/m ³					1 mg/m ³ = 0.80 ppm			
189	Ethanol CAS 64-17-5 C ₂ H ₅ OH	EtOH C ₂ H ₆ O	Ethyl alcohol Methylcarbinol	46.1 1.59 r 113 v	0.79	78 172 °F	58	12 54 °F	3.1 (60)	3.1 (60)	3.3 (63)	3.3 (63)	3.1 (60)	400 IIB T2
						1 ppm = 1.92 mg/m ³					1 mg/m ³ = 0.52 ppm			
190	Ethanol amine CAS 141-43-5 NH ₂ C ₂ H ₄ OH	C ₂ H ₇ NO	2-Aminoethanol 2-Hydroxyethylamine Colamine	61.1 2.11 r	1.02	172 342 °F	0.5	85 185 °F			3.0 (76)	3.0 (76)		410 IIA T2
						1 ppm = 2.55 mg/m ³					1 mg/m ³ = 0.39 ppm			
191	2-Ethoxyethanol CAS 110-80-5 C ₂ H ₅ OC ₂ H ₄ OH	EGEE C ₄ H ₁₀ O ₂	Ethyl glycol Ethylene glycol monoethyl ether Ethyl cellosolve Monoethyl glycol ether Oxitol	90.1 3.11 r	0.93	135 275 °F	5	40 104 °F	1.8 (68)	1.7 (64)	1.7 (64)	1.7 (64)	1.8 (68)	235 IIB T3
						1 ppm = 3.75 mg/m ³					1 mg/m ³ = 0.27 ppm			
192	2-Ethoxyethyl acetate CAS 111-15-9 CH ₃ COOC ₂ H ₄ OC ₂ H ₅	EGEEA C ₆ H ₁₂ O ₃	2-Ethoxyethanol acetate Ethyl glycol acetate Ethylene glycol monoethyl ether acetate Acetic acid 2-ethoxyethylester Cellosolve acetate	132.2 4.56 r	0.98	156 313 °F	2.7	51 124 °F	1.2 (66)	1.2 (66)	1.7 (94)	1.7 (94)	1.2 (66)	380 IIA T2
						1 ppm = 5.51 mg/m ³					1 mg/m ³ = 0.18 ppm			
193	1-Ethoxy-2-propanol CAS 1569-02-4 C ₂ H ₅ OCH ₂ CH(OH)CH ₃	PGEE C ₅ H ₁₂ O ₂	1-Ethoxypropan-2-ol Propylene glycol monoethyl ether 2-Propylenglycol-1-ethylether	104.2 3.60 r	0.90	130 266 °F	10	42 108 °F	1.3 (56)					255 IIB T3
						1 ppm = 4.34 mg/m ³					1 mg/m ³ = 0.23 ppm			
194	Ethoxy trifluoro butenone CAS 17129-06-5 C ₂ H ₅ OCH=CHC(O)CF ₃	ETFBO C ₆ H ₇ F ₃ O ₂	4-Ethoxy-1.1.1-trifluoro-3-buten-2-one	168.1 5.80 r	1.18	159 318 °F	3		1.4* (98)					
						1 ppm = 7.00 mg/m ³					1 mg/m ³ = 0.14 ppm			
195	Ethyl acetate CAS 141-78-6 CH ₃ COOC ₂ H ₅	C ₄ H ₈ O ₂	Acetic acid ethyl ester Ethanoic acid ethyl ester Ethyl ethanoate	88.1 3.04 r 122 v	0.90	77 171 °F	98	-4 25 °F	2.0 (73)	2.0 (73)	2.0 (73)	2.0 (73)	2.2 (81)	470 IIA T1
						1 ppm = 3.67 mg/m ³					1 mg/m ³ = 0.27 ppm			

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
188			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 3750 ppm Gas-Library	
			IR	P 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL // 2500 ppm Gas-Library	
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			OP	Polytron Pulsar 2	1 // 4 / 8 LELm	CSF = 1.40 (Propane = 1.00) / LEL = 3.0
189	500 (960)	1000 (1921)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	SE Ex / PEX 3000 / P 8200 performance approved
			IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL // 4650 ppm Gas-Library	PIR 7000 / P 8700 performance approved
			IR	P 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL // 1550 ppm Gas-Library	PIR 7000 / P 8700 performance approved
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	PIR 3000 / P 8310 performance approved
			EC	Polytron 7000 and 8000 OV1	EtOH: 100 / 200 / 300 ppm / LDL = 10 ppm	S = 0.6
190	2 (5.1)	3 (7.6)	IR	PIR 7000 type 340, P 8700 type 340	20 %LEL (?)	
			IR	P 5700 type 340	20 %LEL (?)	
191	2 (7.5)	200 (751)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	P 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
192	2 (11)	100 (551)	IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
193	50 (217)		CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL // 3250 ppm Gas-Library	
			IR	P 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 1300 ppm Gas-Library	
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
194			IR	PIR 7000 type 334, P 8700 type 334	40 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	30 / 100 %LEL	
			IR	P 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
195	400 (1468)	400 (1468)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	SE Ex / PEX 3000 / P 8200 performance approved
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 3300 ppm Gas-Library	PIR 7000 / P 8700 performance approved
			IR	P 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL // 3300 ppm Gas-Library	PIR 7000 / P 8700 performance approved
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	PIR 3000 / P 8310 performance approved
			OP	Polytron Pulsar 2	1 // 4 / 8 LELm	CSF = 0.68 (Propane = 1.00) / LEL = 2.0

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C	
196	Ethyl acrylate CAS 140-88-5 CH ₂ =CHCOOC ₂ H ₅	C ₆ H ₈ O ₂	Acrylic acid ethyl ester 2-Propenoic acid ethyl ester Ethyl propenoate	100.1 3.46 r 115 v	0.92	100 212 °F	39	9 48 °F	1.7 (71)	1.4 (58)	1.4 (58)	1.4 (58)	1.4 (58)	350 IIB T2	
197	Ethylamine CAS 75-04-7 C ₂ H ₅ NH ₂	C ₂ H ₇ N	Aminoethane Monoethylamine Ethane amine R631	45.1 1.56 r	Gas	17 63 °F	Gas	Gas	3.5 (66)	3.5 (66)	3.5 (66)	3.5 (66)	2.68 (50)	385 IIA T2	
198	Ethylbenzene CAS 100-41-4 C ₆ H ₅ C ₂ H ₅	C ₈ H ₁₀	Phenylethane Ethylbenzol	106.2 3.67 r 76 v	0.87	136 277 °F	9.8	23 73 °F	1.0 (44)	0.8 (35)	0.8 (35)	0.8 (35)	1.0 (44)	430 IIB T2	
199	Ethylbromide CAS 74-96-4 C ₂ H ₅ Br	C ₂ H ₅ Br	Bromoethane Bromoethyl Monobromoethane	109.0 3.76 r 312 v	1.46	38 100 °F	513	n. a.	6.7 (304)	6.7 (304)	6.8 (309)	6.8 (309)	6.7 (304)	510 IIB T1	
200	Ethyl-tert-butylether CAS 637-92-3 C ₂ H ₅ OC(CH ₃) ₃	ETBE C ₆ H ₁₄ O	tert-Butyl ethyl ether 2-Methyl-2-ethoxy propane 2-Ethoxy-2-methyl propane Ethyl-1.1-dimethylethyl ether	102.2 3.53 r 103 v	0.74	73 163 °F	135	-19 -2 °F	1.2 (51)					1 mg/m ³ = 0.23 ppm	
201	Ethylchloride CAS 75-00-3 C ₂ H ₅ Cl	C ₂ H ₅ Cl	Chloroethyl Chloroethane Monochloroethane R160	64.5 2.23 r	Gas	12 54 °F	Gas	Gas	3.6 (97)	3.6 (97)	3.8 (102)	3.8 (102)	3.6 (97)	510 IIA T1	
202	Ethyl chloroformate CAS 541-41-3 ClCOOC ₂ H ₅	C ₃ H ₅ ClO ₂	Ethoxycarbonyl chloride Ethyl chlorocarbonate Chloroformic acid ethyl ester Ethyl chloromethanoate	108.5 3.75 r	1.14	93 199 °F	55	16 61 °F	3.7* (167)					1 mg/m ³ = 0.22 ppm	500 IIA T1
203	Ethylcyclobutane CAS 4806-61-5 (CH ₂) ₃ CHC ₂ H ₅	C ₆ H ₁₂	Ethylcyclobutylmethane	84.2 2.91 r 86 v	0.73	71 160 °F		<-20 <-4 °F	1.2 (42)	1.2 (42)		1.2 (42)	1.2 (42)	210 IIA T3	
204	Ethylcyclohexane CAS 1678-91-7 (CH ₂) ₅ CHC ₂ H ₅	C ₈ H ₁₆	Ethylhexamethylene	112.2 3.87 r 80 v	0.79	132 270 °F	13	<21 <70 °F	0.9 (42)	0.9 (42)		0.9 (42)	0.9 (42)	260 IIA T3	
205	Ethylcyclopentane CAS 1640-89-7 (CH ₂) ₄ CHC ₂ H ₅	C ₇ H ₁₄	Ethylpentamethylene	98.2 3.39 r 88 v	0.77	103 217 °F	41	<21 <70 °F	1.1 (45)	1.05 (43)		1.1 (45)	1.05 (43)	260 IIA T3	

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
196	5 (21)	25 (104)	IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	S = 0.15 (L)
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	25 / 100 %LEL	
			IR	P 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and 8000 OV1	as Aald x 2 (50 / 100 / 200 ppm x 2)	
197	5 (94)	10 (19)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (\$)	
			IR	P 5700 type 334	100 %LEL (\$)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (\$)	
			IR	P 5700 type 340	100 %LEL (\$)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (\$)	
			EC	Polytron 7000 and 8000 NH3 LC	EA: 100 ppm / LDL = 5 ppm	
198	20 (89)	100 (443)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL // 2400 ppm Gas-Library	
			IR	P 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	30 / 100 %LEL // 2400 ppm Gas-Library	
			IR	P 5700 type 340	50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
199		200 (908)	IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL	
			IR	P 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
200			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
201	40 (108)	1000 (2688)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 7200 ppm Gas-Library	
			IR	P 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL // 5400 ppm Gas-Library	
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
202			IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL	
			IR	P 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
203			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
204			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (\$)	
			IR	P 5700 type 340	100 %LEL (\$)	
205			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	P 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
206	Ethylene CAS 74-85-1 CH ₂ =CH ₂	C ₂ H ₄	Ethene Olefiant gas R1150	28.1 0.97 r	Gas	-104 -155 °F	Gas	Gas	2.4 (28)	2.3 (27)		2.7 (32)	2.3 (27)	440 IIB T2
207	Ethylenediamine CAS 107-15-3 NH ₂ -C ₂ H ₄ -NH ₂	EDA C ₂ H ₈ N ₂	1,2-Diaminoethane 1,2-Ethanediamine Dimethylenediamine	60.1 2.07 r	0.90	116 241 °F	12.4	34 93 °F		2.5 (63)	2.5 (63)	2.5 (63)	2.7 (68)	385 IIA T2
208	Ethylene glycol CAS 107-21-1 HOCH ₂ CH ₂ OH	C ₂ H ₆ O ₂	1,2-Ethandiol Ethane-1,2-diol 1,2-Dihydroxyethane Glycol 2-Hydroxyethanol	62.1 2.14 r	1.11	197 387 °F	0.07	111 232 °F	3.2 (83)		3.2 (83)	3.2 (83)		410 IIB T2
209	Ethylene imine CAS 151-56-4 (CH ₂) ₂ NH	C ₂ H ₅ N	Aziridine Aminoethylene Azirane Azacyclopropane	43.1 1.49 r 117 v	0.83	55 131 °F	227	-13 9 °F	3.6 (65)	3.3 (59)	3.3 (59)	3.3 (59)		320 IIB T2
210	Ethylene oxide CAS 75-21-8 C ₂ H ₄ O	EO C ₂ H ₄ O	1,2-Epoxyethane Oxirane Dimethylene oxide	44.1 1.52 r	Gas	10 50 °F	Gas	Gas	2.6 (48)	2.6 (48)	3.0 (55)	3.0 (55)	2.6 (48)	435 IIB T2
211	Ethyl formate CAS 109-94-4 HCOOC ₂ H ₅	C ₃ H ₆ O ₂	Ethyl methanoate Formic acid ethyl ester Methanoic acid ethyl ester	74.1 2.56 r 136 v	0.92	54 129 °F	266	-20 -4 °F	2.7 (83)	2.7 (83)	2.8 (86)	2.8 (86)	2.7 (83)	445 IIA T2
212	2-Ethylhexanal CAS 123-05-7 C ₄ H ₉ CH(C ₂ H ₅)CHO	C ₈ H ₁₆ O	2-Ethyl-1-hexanal 2-Ethylhexaldehyde 2-Ethyl caproaldehyde Butyl ethyl acetaldehyde	128.2 4.43 r	0.82	163 325 °F	2.4	42 108 °F		0.9 (48)		0.85 (45)		185 IIA T4
213	2-Ethylhexanoic acid CAS 149-57-5 CH ₃ (CH ₂) ₃ CH(C ₂ H ₅)COOH	2-EHA C ₈ H ₁₆ O ₂	2-Ethylcaproic acid i-Octanoic acid 3-Heptane carboxylic acid 2-Ethylhexoic acid	144.2 4.98 r	0.91	227 441 °F	0.04	105 221 °F	0.8 (48)					117 IIB T2
214	2-Ethylhexyl acrylate CAS 103-11-7 CH ₂ =CHCOOCH ₂ CH(C ₂ H ₅)C ₄ H ₉	C ₁₁ H ₂₀ O ₂	2-Propenoic acid-2-ethylhexyl ester 2-Ethylhexyl-2-propenoate Acrylic acid (2-ethylhexyl)ester	184.3 6.36 r	0.89	214 417 °F	0.13	82 180 °F	0.8 (61)	0.7 (54)		0.7 (54)		245 T3
215	2-Ethyl-1-hexylamine CAS 104-75-6 C ₄ H ₉ CH(C ₂ H ₅)CH ₂ NH ₂	C ₈ H ₁₉ N	2-Ethylhexylamine 1-Amino-2-ethylhexane 2-Ethyl-1-hexanamine i-Octylamine Isooctylamine 3-Aminomethyl heptane	129.2 4.46 r	0.79	169 336 °F	1.59	50 122 °F	0.8* (43)					265 IIA T3

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
206			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	SE Ex / PEX 3000 / P 8200 performance approved
			IR	PIR 7000 type 334, P 8700 type 334	40 / 100 %LEL // 9200 ppm Gas-Library	PIR 7000 / P 8700 performance approved
			IR	P 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	PIR 3000 / P 8310 performance approved
			EC	Polytron 7000 and 8000 OV1	C2H4: 20 / 50 / 100 ppm / LDL = 5 ppm	S = 1.3
			OP	Polytron Pulsar 2	1 // 4 / 8 LELm	Special version for Ethylene
207		10 (25)	IR	PIR 7000 type 340, P 8700 type 340	25 / 100 %LEL	
			IR	P 5700 type 340	50 + 100 %LEL	
			EC	Polytron 7000 and 8000 NH3 LC	as NH3 x 5 (50 / 100 ppm x 5)	S = 0.2 (L)
208	10 (26)		IR	PIR 7000 type 340, P 8700 type 340	10 / 10 %LEL (&)	only for concentrations < 10 %LEL
209			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
210	1 (1.8)	1 (1.8)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	SE Ex / PEX 3000 / P 8200 performance approved
			IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL // 3900 ppm Gas-Library	PIR 7000 / P 8700 performance approved
			IR	P 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	30 / 100 %LEL // 7800 ppm Gas-Library	PIR 7000 / P 8700 performance approved
			IR	P 5700 type 340	50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and 8000 OV1	EO: 20 / 50 / 200 ppm / LDL = 5 ppm	S = 1.0
			EC	Polytron 5100 EO	20 / 50 / 100 ppm	
			EC	Polytron 3000 C2H4O	50 ppm	
211	100 (309)	100 (309)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
			EC	Polytron 7000 and 8000 OV1	as Et2O (50 / 50 / 200 ppm)	S = 0.4 (L)
212			IR	PIR 7000 type 334, P 8700 type 334	60 / 100 %LEL	
			IR	P 5700 type 334	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	30 / 100 %LEL	
			IR	P 5700 type 340	50 + 100 %LEL	
213			IR	PIR 7000 type 340, P 8700 type 340	10 / 10 %LEL (&)	only for concentrations < 10 %LEL
214	5 (38)		IR	PIR 7000 type 334, P 8700 type 334	40 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 30 %LEL (&)	only for concentrations < 30 %LEL
215			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
216	5-Ethylidene-2-norbornene CAS 16219-75-3 CH ₃ CH=C ₇ H ₈	ENB C ₉ H ₁₂	Ethylidene norbornene 5-Ethylidene-8.9.10-trinorborn-2-ene 5-Ethylidenebicyclo(2.2.1)hept-2-ene	120.2 4.15 r	0.89	146 295 °F	5.6		0.8* (40)		1 mg/m ³ = 0.20 ppm			
217	Ethyl lactate CAS 97-64-3 CH ₃ CH(OH)COOC ₂ H ₅	C ₆ H ₁₀ O ₃	Hydroxypropionic acid ethyl ester Lactic acid ethyl ester Propanoic acid 2-hydroxy ethylester	118.1 4.08 r	1.03	154 309 °F	2	46 115 °F	1.5 (74)		1 mg/m ³ = 0.20 ppm	1.5 (74)		400 IIA T2
218	Ethyl mercaptan CAS 75-08-1 C ₂ H ₅ SH	EtM C ₂ H ₅ S	Ethanethiol Mercaptoethane Ethyl sulfhydrylate Thioethyl alcohol	62.1 2.14 r 129 v	0.84	35 95 °F	576	<-20 <-4 °F	2.8 (72)	2.8 (72)	2.8 (72)	2.8 (72)	2.8 (72)	295 IIB T3
219	Ethyl methacrylate CAS 97-63-2 CH ₂ =C(CH ₃)COOC ₂ H ₅	EMA C ₆ H ₁₀ O ₂	Methacrylic acid ethylester 2-Methyl-2-propenoic acid ethylester Ethyl methyl acrylate Ethyl-2-methyl-2-propenoate	114.1 3.94 r 110 v	0.91	117 243 °F	16	19 66 °F	1.4 (67)	1.5 (71)	1.8 (86)	1.5 (71)		IIA
220	N-Ethylpiperidine CAS 766-09-6 C ₂ H ₅ N(CH ₂) ₅	EPP C ₇ H ₁₅ N	1-Ethylpiperidine	113.2 3.91 r	0.82	131 268 °F	10.3	17 63 °F	1.9* (90)		1 mg/m ³ = 0.21 ppm			
221	Ethylpropionate CAS 105-37-3 C ₂ H ₅ COOC ₂ H ₅	C ₆ H ₁₀ O ₂	Propionic acid ethylester Ethyl propanoate Propanoic acid ethylester	102.1 3.52 r 129 v	0.89	99 210 °F	27	12 54 °F	1.8 (77)		1 mg/m ³ = 0.24 ppm	1.9 (81)		455 IIA T1
222	Ethylpropylether CAS 628-32-0 C ₂ H ₅ OC ₃ H ₇	C ₆ H ₁₂ O	1-Ethoxypropane Propylethylether	88.2 3.04 r 128 v	0.73	64 147 °F	194	<-20 <-4 °F	1.7 (62)		1 mg/m ³ = 0.27 ppm	1.7 (62)		IIB
223	Ethyl vinyl ether CAS 109-92-2 CH ₂ =CHOC ₂ H ₅	EVE C ₄ H ₈ O	Vinyl ethyl ether Ethoxyethene	72.1 2.49 r 102 v	0.75	36 97 °F	561	<-20 <-4 °F	1.7 (51)		1 mg/m ³ = 0.33 ppm	1.7 (51)		200 IIB T4
224	Fluorine CAS 7782-41-4 F ₂	F ₂		38.0 1.31 r	Gas	-188 -306 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
225	Fluorobenzene CAS 462-06-6 C ₆ H ₅ F	MFB C ₆ H ₅ F	Monofluorobenzene Phenyl fluoride	96.1 3.32 r 76 v	1.03	85 185 °F	81	-15 5 °F	1.3* (52)		1 mg/m ³ = 0.25 ppm			IIA
226	Formaldehyde CAS 50-00-0 HCHO	CH ₂ O	Methanal Methyl aldehyde Oxomethane Methylene oxide	30.0 1.04 r	Gas	-19 -2 °F	Gas	Gas	7.0 (88)	7.0 (88)	7.0 (88)	7.0 (88)	7.0 (88)	424 IIB T2
227	Formic acid CAS 64-18-6 HCOOH	CH ₂ O ₂	Methanoic acid Hydrogen carboxylic acid	46.0 1.59 r	1.22	101 214 °F	45	45 113 °F	16.4 (314)	18.0 (345)	18.0 (345)	18.0 (345)	10.0 (192)	520 IIA T1

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
216		5 (25)	IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
217			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
218	0.5 (1.3)	0.5c (1.3)	IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (\$)	
			IR	P 5700 type 334	100 %LEL (\$)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (\$)	
			IR	P 5700 type 340	100 %LEL (\$)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and 8000 H2S LC	EtM: 20 / 50 / 100 ppm / LDL = 1 ppm	
219			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	S = 0.2 (L)
			IR	P 5700 type 340	100 %LEL (?)	
			EC	Polytron 7000 and 8000 OV1	as Et2O x 2 (50 / 50 / 200 ppm x 2)	
220			IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL	
			IR	P 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
221			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
222			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
223			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	polymerizing/sensor poison
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
			EC	Polytron 7000 and 8000 OV1	as EO x 2 (20 / 50 / 200 ppm x 2)	
224	1 (1.6)	0.1 (0.16)	EC	Polytron 7000 and 8000 Cl2	F2: 1 / 10 / 50 ppm	
225			IR	PIR 7000 type 334, P 8700 type 334	70 / 100 %LEL	
			IR	P 5700 type 334	100 %LEL	
226		0.75 (0.94)	IR	PIR 7000 type 340, P 8700 type 340	10 / 10 %LEL (&)	S = 1.0
			EC	Polytron 7000 and 8000 OV1	FYDE: 20 / 50 / 100 ppm / LDL = 5 ppm	
227	5 (9.6)	5 (9.6)	EC	Polytron 7000 and 8000 AC	Acid: 3 / 10 / 30 ppm / LDL = 0.5 ppm	

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
228	Furan CAS 110-00-9 (CH) ₄ O	Oxol C ₄ H ₄ O	Furfuran 1,4-Epoxy-1,3-butadiene Oxacyclopentadiene Divinylene oxide	68.1 2.35 r 104 v	0.94	32 90 °F	658	<-20 <-4 °F	2.3 (65)	2.3 (65)	2.3 (65)	2.3 (65)	390 IIB T2	
229	Furfuraldehyde CAS 98-01-1 C ₄ H ₃ OCHO	C ₅ H ₄ O ₂	Furfural 2-Furaldehyde 2-Furancarboxyaldehyde 2-Furylmethanal Fural	96.1 3.32 r	1.16	162 324 °F	1.5	60 140 °F	2.1 (84)	2.1 (84)	2.1 (84)	2.1 (84)	316 IIB T2	
230	Furfuryl alcohol CAS 98-00-0 C ₄ H ₃ OCH ₂ OH	C ₅ H ₆ O ₂	Furfur alcohol 2-Furylmethanol 2-Hydroxymethylfuran 2-Furancarbinol	98.1 3.39 r	1.13	171 340 °F	0.53	75 167 °F	1.8 (74)	1.8 (74)	1.8 (74)	1.8 (74)	390 IIB T2	
231	Germanium hydride CAS 7782-65-2 GeH ₄	H ₄ Ge	Germane Germanium tetrahydride Germanomethane Tetrahydrogermane	76.6 2.64 r	Gas	-88.5 -127 °F	Gas		2.0* (64)		1 mg/m ³ = 0.31 ppm			
232	Germanium tetrachloride CAS 10038-98-9 GeCl ₄	Cl ₄ Ge	Tetrachlorogermane	214.4 7.40 r	1.88	82 180 °F	97	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	
233	Germanium tetrafluoride CAS 7783-58-6 GeF ₄	F ₄ Ge	Tetrafluorogermane	148.6 5.13 r	Gas	-37 -35 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	
234	Halothane CAS 151-67-7 CF ₃ CHBrCl	C ₂ HBrClF ₃	1,1,1-Trifluoro-2-bromo-2-chloroethane 2-Bromo-2-chloro-1,1,1-trifluoroethane Halon 2311 Fluothrane R123B1	197.4 6.81 r	1.87	50.2 122 °F	242	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	
235	Heptafluoropropane CAS 431-89-0 F ₃ C-CHF-CF ₃	C ₃ HF ₇	1,1,1,2,3,3,3-Heptafluoropropane 2H-Heptafluoropropane R227ea	170.0 5.87 r	Gas	-16.4 2 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.		
236	Heptamethyl trisiloxane CAS 1873-88-7 (CH ₃) ₃ SiO) ₂ Si(H)CH ₃	C ₇ H ₂₂ O ₂ Si ₃	Bis(trimethylsiloxy)methylsilane 1,1,1,3,5,5,5-Heptamethyltrisiloxane Methylbis(trimethylsiloxy)silane	222.5 7.68 r	0.82	142 288 °F					1 mg/m ³ = 0.11 ppm			
237	n-Heptane CAS 142-82-5 C ₇ H ₁₆	C ₇ H ₁₆		100.2 3.46 r 74 v	0.68	98 208 °F	47	-7 19 °F	0.8 (33)	0.85 (35)	1.05 (44)	1.0 (42)	1.1 (46)	220 IIA T3
238	1-Heptanol CAS 111-70-6 C ₇ H ₁₆ OH	C ₇ H ₁₆ O	Heptan-1-ol Heptyl alcohol 1-Hydroxyheptane	116.2 4.01 r	0.82	175 347 °F	0.15	70 158 °F	0.9 (44)	0.9 (44)			1.0 (48)	275 IIB T3
239	2-Heptanone CAS 110-43-0 CH ₃ COC ₆ H ₁₁	MAK C ₇ H ₁₄ O	Heptan-2-one Methyl amyl ketone n-Amyl methyl ketone Methyl pentyl ketone	114.2 3.94 r	0.82	151 304 °F	4.5	40 104 °F		1.1 (52)	1.1 (52)	1.1 (52)	1.1 (52)	305 IIA T2

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
228			CT EC	P 5200, P 8200, PEX 3000, SE Ex Polytron 7000 and 8000 OV1	10 // 100 %LEL as Et2O (50 / 50 / 200 ppm)	S = 0.4 (L)
229		5 (20)	EC	Polytron 7000 and 8000 OV1	as Aald (50 / 100 / 200 ppm)	S = 0.3 (L)
230	10 (41)	50 (204)	EC	Polytron 7000 and 8000 OV1	as IPA (100 / 200 / 300 ppm)	S = 0.35 (L)
231		0.2 (0.64)	EC EC	Polytron 7000 and 8000 Hydride Polytron 7000 and 8000 Hydride SC	GeH4: 0.3 / 1 / 20 ppm / LDL = 0.05 ppm GeH4: 0.3 / 1 / 5 ppm / LDL = 0.02 ppm	
232			EC EC	Polytron 7000 and 8000 AC Polytron 7000 and 8000 HCl	Acid: 3 / 10 / 30 ppm / LDL = 0.5 ppm as SiCl4 (5 / 10 / 20 ppm)	
233			EC	Polytron 7000 and 8000 AC	GeF4: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
234	5 (41)	2c (16)	PY	Pyrolyzer Polytron 7500 PFC	20 ppm / LDL = 0.5 ppm	S = 1.2
235			PY	Pyrolyzer Polytron 7500 PFC	60 ppm / LDL = 1 ppm	S = 0.5
236			IR IR IR IR	PIR 7000 type 334, P 8700 type 334 P 5700 type 334 PIR 7000 type 340, P 8700 type 340 P 5700 type 340	40 / 100 %LEL 50 + 100 %LEL 25 / 100 %LEL 50 + 100 %LEL	
237	500 (2088)	500 (2088)	CT IR IR IR IR IR OP	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 P 5700 type 334 PIR 7000 type 340, P 8700 type 340 P 5700 type 340 PIR 3000, P 5310, P 8310 Polytron Pulsar 2	10 // 100 %LEL 25 / 100 %LEL // 1700 ppm Gas-Library 50 + 100 %LEL Gas-Library 8 / 100 %LEL // 425 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 100 %LEL 1 // 4 / 8 LELm	CSF = 0.67 (Propane = 1.00) / LEL = 0.8
238			IR IR	PIR 7000 type 340, P 8700 type 340 P 5700 type 340	100 %LEL (?) 100 %LEL (?)	
239	50 (238)	100 (476)	IR IR	PIR 7000 type 340, P 8700 type 340 P 5700 type 340	100 %LEL (?) 100 %LEL (?)	

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
240	1-Heptene CAS 592-76-7 C ₇ H ₁₄ CH=CH ₂	C ₇ H ₁₄	Hept-1-ene 1-Heptylene	98.2 3.39 r 88 v	0.70 201 °F 1 ppm = 4.09 mg/m ³	94 18 °F	64	-8 18 °F	1.0 (41)		1 mg/m ³ = 0.24 ppm			250 IIB T3
241	Hexafluoro-1,3-butadiene CAS 685-63-2 F ₂ C=CF-CF=CF ₂	C ₄ F ₆	Perfluoro butadiene	162.0 5.59 r	Gas 43 °F 1 ppm = 6.75 mg/m ³	6	Gas		7.0* (473)		1 mg/m ³ = 0.15 ppm			
242	Hexafluoroethane CAS 76-16-4 CF ₃ CF ₃	C ₂ F ₆	R116	138.0 4.76 r	Gas -78.2 -109 °F 1 ppm = 5.75 mg/m ³	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
243	Hexamethyldisilazane CAS 999-97-3 (CH ₃) ₃ Si-NH-Si(CH ₃) ₃	HMDS C ₆ H ₁₉ NSi ₂	Bis-trimethylsilyl-amine Tetramethyl-3-aza-2,4-disilapentane	161.4 5.57 r	0.77 127 261 °F 1 ppm = 6.73 mg/m ³	20			0.8* (54)		1 mg/m ³ = 0.15 ppm			
244	Hexamethyldisiloxane CAS 107-46-0 (CH ₃) ₃ Si-O-Si(CH ₃) ₃	HMDSO C ₆ H ₁₈ OSi ₂	Tetramethyl-3-oxa-2,4-disilapentane	162.4 5.61 r 93 v	0.76 214 °F 1 ppm = 6.77 mg/m ³	101	20	-8 18 °F	0.7 (47)		1 mg/m ³ = 0.15 ppm			310 IIB T2
245	n-Hexane CAS 110-54-3 C ₆ H ₁₄	C ₆ H ₁₄	Hexyl hydride	86.2 2.98 r 81 v	0.66 156 °F 1 ppm = 3.59 mg/m ³	69 162	162	<-20 <-4 °F	1.0 (36)	1.0 (36)	1.1 (40)	1.1 (40)	1.0 (36)	230 IIA T3
246	1-Hexanol CAS 111-27-3 C ₆ H ₁₃ OH	C ₆ H ₁₄ O	Hexan-1-ol Hexyl alcohol Amyl carbinol 1-Hydroxyhexane	102.2 3.53 r	0.82 315 °F 1 ppm = 4.26 mg/m ³	157	0.9	60 140 °F	1.1 (47)	1.1 (47)		1.2 (51)	1.2 (51)	280 IIB T3
247	2-Hexanone CAS 591-78-6 CH ₃ COC ₄ H ₉	MBK C ₆ H ₁₂ O	Hexan-2-one Methyl butyl ketone Butyl methyl ketone	100.2 3.46 r 93 v	0.81 262 °F 1 ppm = 4.18 mg/m ³	128	12.8	23 73 °F	1.2 (50)	1.2 (50)		1.2 (50)	1.2 (50)	420 IIA T2
248	3-Hexanone CAS 589-38-8 C ₂ H ₅ COC ₃ H ₇	C ₆ H ₁₂ O	Hexan-3-one Ethylpropylketone	100.2 3.46 r 76 v	0.82 253 °F 1 ppm = 4.18 mg/m ³	123	13.5	20 68 °F	1.0 (42)			1.0 (42)		IIA
249	1-Hexene CAS 592-41-6 C ₄ H ₉ CH=CH ₂	C ₆ H ₁₂	Hex-1-ene Butyl ethylene Hexylene	84.2 2.91 r 94 v	0.67 145 °F 1 ppm = 3.51 mg/m ³	63 199		<-20 <-4 °F	1.2 (42)			1.2 (42)		255 IIB T3

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
240			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	S = 0.15 (L)
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and 8000 OV1	as Aald x 2 (50 / 100 / 200 ppm x 2)	
241		5 (34)	PY	Pyrolyzer Polytron 7500 PFC	C4F6: 2 / 30 ppm / LDL = 0.5 ppm	
242			PY	Pyrolyzer Polytron 7500 PFC	400 ppm / LDL = 10 ppm	S = 0.1
243			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	S = 1.5 (L)
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
			EC	Polytron 7000 and 8000 OV1	as MeOH (20 / 50 / 200 ppm)	
244			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL // 2450 ppm Gas-Library	S = 0.95 (L)
			IR	P 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL // 1400 ppm Gas-Library	
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and 8000 OV1	as MeOH (20 / 50 / 200 ppm)	
245	50 (180)	500 (1796)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	SE Ex / PEX 3000 / P 8200 performance approved
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL // 2500 ppm Gas-Library	PIR 7000 / P 8700 performance approved
			IR	P 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL // 500 ppm Gas-Library	PIR 7000 / P 8700 performance approved
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	PIR 3000 / P 8310 performance approved
			OP	Polytron Pulsar 2	1 // 4 / 8 LELm	CSF = 0.77 (Propane = 1.00) / LEL = 1.0
246	50 (213)		IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
247	5 (21)	100 (418)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
248			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
249			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	S = 0.15 (L)
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 2400 ppm Gas-Library	
			IR	P 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	8 / 100 %LEL // 960 ppm Gas-Library	
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and 8000 OV1	as Aald x 2 (50 / 100 / 200 ppm x 2)	

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
250			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	P 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
251			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
252		1 (1.3)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			EC	Polytron 7000 and 8000 N2H4	N2H4: 0.3 / 1 / 3 ppm / LDL = 0.02 ppm	
			EC	Polytron 3000 N2H4	1 ppm	
253			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	SE Ex / PEX 3000 / P 8200 performance approved
			EC	Polytron 7000 and 8000 H2	H2: 500 / 1000 / 3000 ppm / LDL = 15 ppm	
			EC	Polytron 5100 H2	500 ppm	
			EC	Polytron 3000 H2	1000 / 3000 ppm	
254	2 (6.7)	3 (10)	EC	Polytron 7000 and 8000 AC	HBr: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
			EC	Polytron 7000 and 8000 HCl	HBr: 20 / 30 / 100 ppm / LDL = 1 ppm	
255	2 (3.0)	5c (7.6)	EC	Polytron 7000 and 8000 HCl	HCl: 20 / 30 / 100 ppm / LDL = 1 ppm	
			EC	Polytron 7000 and 8000 AC	HCl: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
			EC	Polytron 3000 HCl	30 ppm	
			EC	Polytron 3000 AC	20 ppm	
256		10 (11)	EC	Polytron 7000 and 8000 HCN	HCN: 10 / 50 / 50 ppm / LDL = 1.5 ppm	
			EC	Polytron 3000 HCN	50 ppm	
257	1 (0.83)	3 (2.5)	EC	Polytron 7000 and 8000 AC	HF: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
			EC	Polytron 3000 AC	10 ppm	
258			EC	Polytron 7000 and 8000 AC	Acid: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
259		1 (1.4)	EC	Polytron 7000 and 8000 H2O2 HC	H2O2: 1000 / 4000 / 7000 ppm	LDL = 100 ppm
			EC	Polytron 7000 and 8000 H2O2 LC	H2O2: 1 / 5 / 300 ppm / LDL = 0.1 ppm	
			EC	Polytron 5100 H2O2 LC	5 / 10 / 20 / 50 / 100 ppm	
260	0.015 (0.05)	0.05 (0.17)	EC	Polytron 7000 and 8000 Hydride	SeH2: 0.5 / 1 / 1 ppm / LDL = 0.3 ppm	
261	5 (7.1)	20c (28)	EC	Polytron 7000 and 8000 H2S	H2S: 5 / 50 / 100 ppm / LDL = 0.5 ppm	
			EC	Polytron 7000 and 8000 H2S HC	H2S: 100 / 500 / 1000 ppm / LDL = 10 ppm	
			EC	Polytron 7000 and 8000 H2S LC	H2S: 10 / 50 / 100 ppm / LDL = 1 ppm	
			EC	Polytron 5100 H2S	10 / 20 / 50 / 100 ppm	
			EC	Polytron 5100 H2S HC	100 / 200 / 300 / 500 / 1000 ppm	
			EC	Polytron 5100 H2S LC	10 / 20 / 50 / 100 ppm	
			EC	Polytron 3000 H2S	20 / 50 / 100 ppm	
			EC	Polytron 2000 H2S	20 / 100 ppm	
262			PY	Pyrolyzer Polytron 7500 PFC	20 ppm / LDL = 0.5 ppm	S = 1.3

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
263	Isoprene CAS 78-79-5 CH ₂ =C(CH ₃)CH=CH ₂	C ₅ H ₈	2-Methyl-1,3-butadiene	68.1 2.35 r 62 v	0.68	34 93 °F	604	<-20 <-4 °F	1.0 (28)			1.5 (43)		220 IIB T3
											1 mg/m ³ = 0.35 ppm			
264	Lead tetraethyl CAS 78-00-2 Pb(C ₂ H ₅) ₄	TEL C ₈ H ₂₀ Pb	Tetraethyl lead Tetraethylplumbane	323.4 11.16 r	1.65	180 356 °F	0.3	80 176 °F	1.8 (243)		1.8 (243)	1.8 (243)		
											1 mg/m ³ = 0.07 ppm			
265	D-Limonene CAS 5989-27-5 CH ₂ C(CH ₃)C ₆ H ₈ CH ₃	C ₁₀ H ₁₆	p-Mentha-1,8-diene 1-Methyl-4-isopropenyl-1-cyclohexene 4-Isopropenyl-1-methyl cyclohexene (R)-(+)-Limonene Carvene	136.2 4.70 r	0.84	176 349 °F	2	48 118 °F	0.7 (40)					235 IIA T3
											1 mg/m ³ = 0.18 ppm			
266	Mesityl oxide CAS 141-79-7 (CH ₃) ₂ C=CHCOCH ₃	MO C ₆ H ₁₀ O	4-Methyl-3-penten-2-one 4-Methylpent-3-en-2-one Methyl-i-butylene ketone Methyl-i-butenyl ketone i-Propylidene acetone Isopropylidene acetone Isobutenyl methyl ketone	98.1 3.39 r	0.85	130 266 °F	11	24 75 °F		1.6 (65)	1.4 (57)	1.4 (57)	1.4 (57)	340 IIA T2
											1 mg/m ³ = 0.24 ppm			
267	Methacrylic acid CAS 79-41-4 CH ₂ =C(CH ₃)COOH	C ₄ H ₆ O ₂	2-Methyl-2-propenoic acid a-Methylacrylic acid	86.1 2.97 r	1.02	161 322 °F	0.87	74 165 °F	1.0 (36)			1.6 (57)		355 IIB T2
											1 mg/m ³ = 0.28 ppm			
268	Methane CAS 74-82-8 CH ₄	CH ₄	Methyl hydride R50	16.0 0.55 r	Gas	-162 -260 °F	Gas	Gas	4.4 (29)	4.4 (29)		5.0 (33)	4.4 (29)	595 IIA T1
											1 mg/m ³ = 1.50 ppm			
269	Methanol CAS 67-56-1 CH ₃ OH	MeOH CH ₄ O	Methyl alcohol Carbinol	32.0 1.10 r 152 v	0.79	65 149 °F	129	9 48 °F	6.0 (80)	6.0 (80)	6.0 (80)	6.0 (80)	5.5 (73)	440 IIA T2
											1 mg/m ³ = 0.75 ppm			
270	3-Methoxybutanol CAS 2517-43-3 CH ₃ CH(OCH ₃)CH ₂ CH ₂ OH	C ₆ H ₁₂ O ₂	3-Methoxy-1-butanol 1,3-Butyleneglycol monomethyl ether	104.2 3.60 r	0.93	161 322 °F	1.3	74 165 °F	1.5* (65)					IIB
											1 mg/m ³ = 0.23 ppm			
271	4-Methoxy cyclohexanone CAS 13482-23-0 CH ₃ OCH(CH ₂) ₄ CO	C ₇ H ₁₂ O ₂	p-Methoxy cyclohexanone	128.2 4.43 r	0.98	189 372 °F			1.1** (59)					
											1 mg/m ³ = 0.19 ppm			

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
263	3 (8.5)		CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	polymerizing/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	40 / 100 %LEL	
			IR	P 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
264	0.004 (0.05)	0.006 (0.08)	IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
265	5 (28)		IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
266		25 (102)	EC	Polytron 7000 and 8000 OV1	as EtOH (100 / 200 / 300 ppm)	S = 0.6 (L)
267		20 (72)	EC	Polytron 7000 and 8000 OV1	as Aald x 2 (50 / 100 / 200 ppm x 2)	S = 0.15 (L)
268			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	SE Ex / PEX 3000 / P 8200 performance approved PIR 7000 / P 8700 performance approved also 1 + 2 + 5 + 10 + 20 + 30 + 50 vol-% PIR 7000 / P 8700 performance approved PIR 3000 / P 8310 performance approved CSF = 1.57 (Propane = 1.00) / LEL = 4.4
			IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL // 6600 ppm // 100 vol%	
			IR	P 5700 type 334	20 + 50 + 100 %LEL // 100 vol-% Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	30 / 100 %LEL // 13200 ppm Gas-Library	
			IR	P 5700 type 340	50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			OP	Polytron Pulsar 2	1 // 4 / 8 LELm	
269	200 (267)	200 (267)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	SE Ex / PEX 3000 / P 8200 performance approved PIR 7000 / P 8700 performance approved PIR 7000 / P 8700 performance approved PIR 3000 / P 8310 performance approved S = 1.2
			IR	PIR 7000 type 334, P 8700 type 334	10 / 100 %LEL // 5500 ppm Gas-Library	
			IR	P 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL // 2500 ppm Gas-Library	
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (!)	
			EC	Polytron 7000 and 8000 OV1	MeOH: 20 / 50 / 200 ppm / LDL = 5 ppm	
270			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
271			IR	PIR 7000 type 334, P 8700 type 334	55 / 100 %LEL (&)	
			IR	P 5700 type 334	100 %LEL (&)	
			IR	PIR 7000 type 340, P 8700 type 340	25 / 100 %LEL (&)	
			IR	P 5700 type 340	50 + 100 %LEL (&)	

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
272	Methoxy dihydropyrane CAS 4454-05-1 OCH=CH(CH ₂) ₂ CHOCH ₃	MDHP C ₆ H ₁₀ O ₂	3,4-Dihydro-2-methoxypyrene 2-Methoxy-3,4-dihydropyrane	114.1 3.94 r	1.00	127 261 °F	13		1.0* (48)		1 mg/m ³ = 0.21 ppm			
273	2-Methoxyethanol CAS 109-86-4 CH ₃ OC ₂ H ₄ OH	EGME C ₃ H ₈ O ₂	Ethylene glycol monomethyl ether Methyl glycol Glycol monomethyl ether Monomethyl glycol ether Methyl oxitol Methyl cellosolve	76.1 2.63 r	0.97	124 255 °F	12	39 102 °F	2.5 (79)	1.8 (57)	1.8 (57)	1.8 (57)	2.4 (76)	285 IIB T3
274	1-Methoxy-2-propanol CAS 107-98-2 CH ₃ OCH ₂ CH(OH)CH ₃	PGME C ₄ H ₁₀ O ₂	Propylene glycol monomethyl ether 1,2-Propanediol-1-monomethyl ether 1-Methyl propylene glycol-2 1-Methoxy-2-hydroxypropane	90.1 3.11 r	0.92	120 248 °F	13	32 90 °F	1.8 (68)		1.6 (60)	1.6 (60)		270 IIB T3
275	Methoxy propoxy propanol CAS 34590-94-8 CH ₃ OC ₃ H ₆ OC ₃ H ₆ OH	DPGME C ₇ H ₁₆ O ₃	Dipropylene glycol monomethyl ether Dipropylene glycol methyl ether (2-Methoxymethylethoxy)-1-propanol (2-Methoxymethylethoxy)propanol Methyl dipropylene glycol	148.2 5.12 r	0.95	184 363 °F	0.7	70 158 °F	1.1 (68)	1.1 (68)	1.1 (68)	1.1 (68)		270 IIA T3
276	1-Methoxy-2-propyl acetate CAS 108-65-6 CH ₃ COOC ₃ H ₆ OCH ₃	PGMEA C ₆ H ₁₂ O ₃	Acetic acid methoxy propylic ester 2-Methoxy-1-methylethyl acetate Propylene glycol methylether acetate 1-Methoxy-2-acetoxypropane	132.2 4.56 r	0.97	150 302 °F	3.1	43 109 °F	1.3 (72)			1.5 (83)		IIB
277	Methyl acetate CAS 79-20-9 CH ₃ COOCH ₃	C ₃ H ₆ O ₂	Acetic acid methyl ester Methyl ethanoate Ethanoic acid methyl ester	74.1 2.56 r 154 v	0.93	57 135 °F	228	-13 9 °F	3.1 (96)	3.1 (96)	3.1 (96)	3.1 (96)	3.2 (99)	505 IIA T1
278	Methyl acrylate CAS 96-33-3 CH ₂ =CHCOOCH ₃	C ₄ H ₆ O ₂	Acrylic acid methyl ester Methyl propenoate Methoxycarbonylethylene	86.1 2.97 r 113 v	0.95	80 176 °F	91	-3 27 °F	2.0 (72)	1.95 (70)	2.8 (100)	2.8 (100)	2.4 (86)	415 IIB T2
279	Methylallylchloride CAS 563-47-3 CH ₂ =C(CH ₃)CH ₂ Cl	C ₄ H ₇ Cl	3-Chloro-2-methylprop-1-ene 2-Methylallyl chloride 3-Chloro-i-butene Methallyl chloride	90.6 3.13 r 140 v	0.93	72 162 °F	138	-12 10 °F	2.3 (87)	2.1 (79)		3.2 (121)		476 IIA T1

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
272			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
273	1 (3.2)	25 (79)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	P 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and 8000 OV1	as MeOH (20 / 50 / 200 ppm)	S = 1.4 (L)
274	100 (375)	100 (375)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 3200 ppm Gas-Library	PIR 7000 / P 8700 performance approved
			IR	P 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 1600 ppm Gas-Library	PIR 7000 / P 8700 performance approved
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
275	50 (309)	100 (618)	IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
276	50 (275)		IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 2100 ppm Gas-Library	
			IR	P 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	8 / 100 %LEL // 700 ppm Gas-Library	
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
277	200 (618)	200 (618)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	P 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
278	5 (18)	10 (36)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL // 6000 ppm Gas-Library	
			IR	P 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	35 / 100 %LEL // 6000 ppm Gas-Library	
			IR	P 5700 type 340	50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and 8000 OV1	as Aald x 2 (50 / 100 / 200 ppm x 2)	S = 0.15 (L)
279			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
280	Methylamine CAS 74-89-5 CH ₃ NH ₂	MA CH ₅ N	Aminomethane Monomethylamine R630	31.1 1.07 r	Gas	-6 21 °F	Gas	Gas	4.9 (63)	4.2 (54)	4.9 (63)	4.9 (63)	4.2 (54)	430 IIA T2
281	Methyl-i-amyl ketone CAS 110-12-3 CH ₃ COCH ₂ CH ₂ CH(CH ₃) ₂	MiAK C ₇ H ₁₄ O	5-Methyl-2-hexanone i-Amyl methyl ketone Isoamyl methyl ketone i-Pentyl methyl ketone Isopentyl methyl ketone 2-Methyl-5-hexanone	114.2 3.94 r	0.89	144 291 °F	6.4	35 95 °F	1.0 (48)		1.0 (48)	1.0 (48)		455 IIA T1
282	Methyl bromide CAS 74-83-9 CH ₃ Br	CH ₃ Br	Bromomethane Monobromomethane R40B1	94.9 3.28 r	Gas	4 39 °F	Gas	Gas	8.6 (340)		10.0 (395)	10.0 (395)		535 IIA T1
283	2-Methylbutane CAS 78-78-4 CH ₃ CH(CH ₃)C ₂ H ₅	C ₅ H ₁₂	i-Pentane Isopentane Ethyl dimethyl methane Isoamyl hydride	72.2 2.49 r 94 v	0.62	28 82 °F	761	<-20 <-4 °F	1.3 (39)	1.3 (39)		1.4 (42)	1.3 (39)	420 IIA T2
284	3-Methylbutanoic acid CAS 503-74-2 (CH ₃) ₂ CHCH ₂ COOH	3MBTA C ₆ H ₁₀ O ₂	3-Methylbutyric acid i-Pentanoic acid Isopentanoic acid i-Valeric acid Isovaleric acid	102.1 3.52 r	0.93	176 349 °F	0.5	78 172 °F	1.4 (60)					385 IIA T2
285	2-Methyl-1-butanol CAS 137-32-6 C ₂ H ₅ CH(CH ₃)CH ₂ OH	C ₆ H ₁₂ O	2-Methyl butyl alcohol i-Pentanol Isopentanol sec-Butyl carbinol	88.2 3.04 r	0.82	129 264 °F	3.3	40 104 °F	1.2 (44)					340 IIA T2
286	Methyl-tert-butyl ether CAS 1634-04-4 CH ₃ OC(CH ₃) ₃	MTBE C ₅ H ₁₂ O	tert-Butyl methyl ether 2-Methoxy-2-methyl propane 2-Methyl-2-methoxy propane	88.2 3.04 r 119 v	0.74	55 131 °F	270	<-20 <-4 °F	1.6 (59)	1.5 (55)		1.6 (59)	1.5 (55)	435 IIA T2
287	Methyl-i-butylketone CAS 108-10-1 (CH ₃) ₂ CHCH ₂ COCH ₃	MiBK C ₆ H ₁₂ O	4-Methyl-2-pentanone i-Propyl acetone Isopropyl acetone Isobutyl methylketone i-Butyl methylketone Hexone Methyl isobutyl ketone	100.2 3.46 r 94 v	0.80	116 241 °F	19	14 57 °F	1.2 (50)	1.2 (50)	1.2 (50)	1.2 (50)	1.2 (50)	475 IIA T1

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
280	10 (13)	10 (13)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	P 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
			EC	Polytron 7000 and 8000 NH3 LC	MA: 100 ppm / LDL = 5 ppm	
281	20 (95)	100 (476)	IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
282	1 (4.0)	20c (79)	IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	S = 0.4
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			PY	Pyrolyzer Polytron 7500 PFC	100 ppm / LDL = 1 ppm	
283	1000 (3008)		CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	CSF = 1.02 (Propane = 1.00) / LEL = 1,3
			IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL // 1950 ppm Gas-Library	
			IR	P 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL // 650 ppm Gas-Library	
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
284			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	30 / 100 %LEL	
			IR	P 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
285			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
286	50 (184)		CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 2400 ppm Gas-Library	
			IR	P 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 800 ppm Gas-Library	
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
287	20 (84)	100 (418)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	PIR 7000 / P 8700 performance approved
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL // 3000 ppm Gas-Library	
			IR	P 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 1200 ppm Gas-Library	
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	PIR 7000 / P 8700 performance approved

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
288	2-Methyl-3-butyn-2-ol CAS 115-19-5 CHCC(CH ₃) ₂ OH	C ₆ H ₈ O	Dimethyl ethinyl carbinol Ethinyl dimethyl carbinol 3-Methyl butynol	84.1 2.90 r 98 v	0.86	104 219 °F	20	20 68 °F	1.6 (56)		1 mg/m ³ = 0.29 ppm			350 IIB T2
289	Methyl chloride CAS 74-87-3 CH ₃ Cl	CH ₃ Cl	Chloromethyl Chloromethane Monochloromethane R40	50.5 1.74 r	Gas	-24 -11 °F	Gas	Gas	7.6 (160)	7.6 (160)	8.1 (170)	8.1 (170)	7.6 (160)	625 IIA T1
290	Methyl chloroformate CAS 79-22-1 ClCOOCH ₃	C ₂ H ₃ ClO ₂	Chloroformic acid methyl ester Methoxycarbonyl chloride Methyl chloromethanoate Methyl chlorocarbonate	94.5 3.26 r 362 v	1.22	72 162 °F	127	10 50 °F	7.5 (295)	7.5 (295)			7.5 (295)	475 IIA T1
291	Methylcyclohexane CAS 108-87-2 (CH ₂) ₅ CHCH ₃	MCH C ₇ H ₁₄	Hexahydrotoluene Cyclohexylmethane Toluene hexahydride	98.2 3.39 r 88 v	0.77	101 214 °F	48	-4 25 °F	1.1 (45)	1.0 (41)	1.2 (49)	1.2 (49)	1.15 (47)	260 IIA T3
292	Methyl ethyl carbonate CAS 623-53-0 (CH ₃ O)CO(OCH ₂ CH ₃)	EMC C ₄ H ₈ O ₃	Carbonic acid ethyl methyl ester Ethyl methyl carbonate	104.1 3.59 r	1.01	107 225 °F	10.7		2.0** (87)		1 mg/m ³ = 0.23 ppm			
293	Methylethyl ether CAS 540-67-0 C ₂ H ₅ OCH ₃	C ₃ H ₈ O	Ethylmethyl ether Methoxy ethane	60.1 2.07 r	Gas	7.4 45 °F	Gas	Gas	2.0 (50)	2.0 (50)		2.0 (50)	2.0 (50)	190 IIB T4
294	2-Methyl-4-ethylhexane CAS 3074-75-7 (CH ₃) ₂ CHCH ₂ CH(C ₂ H ₅) ₂	C ₉ H ₂₀	4-Ethyl-2-methylhexane i-Nonane Isononane	128.3 4.43 r 78 v	0.72	134 273 °F		21 70 °F	0.7 (37)		1 mg/m ³ = 0.19 ppm			280 IIA T3
295	Methyl ethyl ketone CAS 78-93-3 CH ₃ COC ₂ H ₅	MEK C ₄ H ₈ O	2-Butanone Butan-2-one Methyl propanone Ethyl methyl ketone Methyl acetone	72.1 2.49 r 84 v	0.80	80 176 °F	105	-10 14 °F	1.5 (45)	1.5 (45)	1.4 (42)	1.4 (42)	1.8 (54)	475 IIB T1
296	Methylethyl sulfide CAS 624-89-5 CH ₃ SC ₂ H ₅	C ₃ H ₈ S	Methylthioethane 2-Thiabutane	76.2 2.63 r 102 v	0.84	66 151 °F	198	<-15 <5 °F	1.8 (57)		1 mg/m ³ = 0.31 ppm			IIA
297	Methylfluoride CAS 593-53-3 CH ₃ F	CH ₃ F	Fluoromethane R41	34.0 1.17 r	Gas	-78 -108 °F	Gas	Gas	5.6* (79)		1 mg/m ³ = 0.71 ppm			

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
288	0.9 (3.2)		CT IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 340, P 8700 type 340 P 5700 type 340	100 %LEL 100 %LEL (?) 100 %LEL (?)	
289	50 (105)	100 (210)	CT IR IR IR IR PY	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 P 5700 type 334 PIR 7000 type 340, P 8700 type 340 P 5700 type 340 PIR 3000, P 5310, P 8310 Pyrolyzer Polytron 7500 PFC	10 // 100 %LEL 20 / 100 %LEL // 15200 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 10 / 100 %LEL // 7600 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 100 %LEL (!) 100 ppm / LDL = 1 ppm	corrosive/sensor poison PIR 7000 / P 8700 performance approved PIR 7000 / P 8700 performance approved S = 0.5
290	0.2 (0.79)		IR IR IR IR	PIR 7000 type 334, P 8700 type 334 P 5700 type 334 PIR 7000 type 340, P 8700 type 340 P 5700 type 340 PIR 3000, P 5310, P 8310	10 / 100 %LEL // 7500 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 10 / 100 %LEL // 7500 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 100 %LEL	PIR 7000 / P 8700 performance approved PIR 7000 / P 8700 performance approved
291	200 (818)	500 (2046)	CT IR IR IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 P 5700 type 334 PIR 7000 type 340, P 8700 type 340 P 5700 type 340 PIR 3000, P 5310, P 8310	100 %LEL 30 / 100 %LEL // 3000 ppm Gas-Library 50 + 100 %LEL Gas-Library 5 / 100 %LEL // 500 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 100 %LEL	PIR 7000 / P 8700 performance approved
292			IR IR IR IR IR	PIR 7000 type 334, P 8700 type 334 P 5700 type 334 PIR 7000 type 340, P 8700 type 340 P 5700 type 340 PIR 3000, P 5310, P 8310	15 / 100 %LEL 20 + 50 + 100 %LEL 15 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL	
293			CT IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 340, P 8700 type 340 P 5700 type 340	100 %LEL 100 %LEL (?) 100 %LEL (?)	
294			CT IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 340, P 8700 type 340 P 5700 type 340	100 %LEL 100 %LEL (?) 100 %LEL (?)	
295	200 (601)	200 (601)	CT IR IR IR IR OP	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 P 5700 type 334 PIR 7000 type 340, P 8700 type 340 P 5700 type 340 PIR 3000, P 5310, P 8310 Polytron Pulsar 2	10 // 100 %LEL 35 / 100 %LEL // 4500 ppm Gas-Library 50 + 100 %LEL Gas-Library 25 / 100 %LEL // 3000 ppm Gas-Library 50 + 100 %LEL Gas-Library 100 %LEL 1 // 4 / 8 LELm	SE Ex / PEX 3000 / P 8200 performance approved PIR 7000 / P 8700 performance approved PIR 7000 / P 8700 performance approved CSF = 0.51 (Propane = 1.00) / LEL = 1.5
296			IR IR IR IR IR	PIR 7000 type 334, P 8700 type 334 P 5700 type 334 PIR 7000 type 340, P 8700 type 340 P 5700 type 340 PIR 3000, P 5310, P 8310	100 %LEL (\$) 100 %LEL (\$) 100 %LEL (\$) 100 %LEL (\$) 100 %LEL	
297			IR IR IR IR PY	PIR 7000 type 334, P 8700 type 334 P 5700 type 334 PIR 7000 type 340, P 8700 type 340 P 5700 type 340 Pyrolyzer Polytron 7500 PFC	100 %LEL (?) 100 %LEL (?) 100 %LEL (?) 100 %LEL (?) 100 ppm / LDL = 5 ppm	S = 0.3

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
298	Methyl formate CAS 107-31-3 HCOOCH ₃	C ₂ H ₄ O ₂	Formic acid methyl ester Methyl methanoate Methanoic acid methyl ester R611	60.1 2.07 r 193 v	0.97	32 90 °F	638	<-20 <-4 °F	5.0 (125)	5.0 (125)	4.5 (113)	4.5 (113)	5.0 (125)	450 IIA T2
299	Methyl hydrazine CAS 60-34-4 CH ₃ NH-NH ₂	MMH CH ₆ N ₂	Monomethylhydrazine	46.1 1.59 r 82 v	0.88	87 189 °F	50	-8 18 °F	2.5 (48)		2.5 (48)	2.5 (48)		190 T4
300	Methyl iodide CAS 74-88-4 CH ₃ I	Mel CH ₃ I	Iodomethane Halon 10001	141.9 4.90 r	2.28	42 108 °F	441		8.5 (503)		n. a.			355 T2
301	Methyl mercaptan CAS 74-93-1 CH ₃ SH	MeM CH ₄ S	Methanethiol Mercaptomethane Thiomethanol Methyl sulfhydrate	48.1 1.66 r	Gas	6 43 °F	Gas	Gas	4.1 (82)	4.1 (82)	3.9 (78)	3.9 (78)	4.1 (82)	360 IIA T2
302	Methyl methacrylate CAS 80-62-6 CH ₂ =C(CH ₃)COOCH ₃	MMA C ₅ H ₈ O ₂	Methacrylic acid methyl ester Methyl-2-methyl-2-propenoate 2-Methyl-2-propenoic acid methyl ester	100.1 3.46 r 113 v	0.94	101 214 °F	40	10 50 °F	1.7 (71)	1.7 (71)	1.7 (71)	1.7 (71)	1.7 (71)	430 IIA T2
303	N-Methyl morpholine CAS 109-02-4 (CH ₂) ₄ ONCH ₃	NMM C ₅ H ₁₁ NO	4-Methyl morpholine	101.2 3.49 r	0.91	116 241 °F	30	13 55 °F	2.2* (93)					
304	2-Methyl pentane CAS 107-83-5 CH ₃ CH(CH ₃)C ₃ H ₇	C ₆ H ₁₄	Dimethylpropylmethane i-Hexane Isohexane	86.2 2.98 r 99 v	0.65	60 140 °F	227	<-20 <-4 °F	1.2 (43)			1.2 (43)		300 IIA T3
305	3-Methyl pentane CAS 96-14-0 CH ₃ CH ₂ CH(CH ₃)CH ₂ CH ₃	C ₆ H ₁₄	i-Hexane Isohexane Diethylmethylmethane 1,2,3-Trimethylpropane	86.2 2.98 r 98 v	0.66	63 145 °F	203	<-20 <-4 °F	1.2 (43)			1.2 (43)		300 IIA T3
306	4-Methyl-2-pentanol CAS 108-11-2 (CH ₃) ₂ CHCH ₂ CH(OH)CH ₃	MiBC C ₆ H ₁₄ O	4-Methylpentan-2-ol 1,3-Dimethyl butanol 4-Methyl-2-amyl alcohol 4-Methyl-2-pentyl alcohol Methyl-i-butyl carbinol Methyl isobutyl carbinol	102.2 3.53 r	0.81	131 268 °F	4.9	37 99 °F	1.0 (43)	1.14 (49)	1.0 (43)	1.1 (47)	1.14 (49)	335 IIA T2
307	Methylpropionate CAS 554-12-1 C ₂ H ₅ COOCH ₃	C ₄ H ₈ O ₂	Propanoic acid methylester Methylpropanoate	88.1 3.04 r 145 v	0.91	80 176 °F	84	-2 28 °F	2.4 (88)			2.5 (92)		465 T1
308	Methylpropylether CAS 557-17-5 CH ₃ OC ₃ H ₇	C ₄ H ₁₀ O	1-Methoxypropane Methyl-n-propylether	74.1 2.56 r 108 v	0.73	39 102 °F	507	<-20 <-4 °F	1.7 (52)					

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
298	50 (125)	100 (250)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL	
			IR	P 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
299		0.2 (0.38)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			EC	Polytron 7000 and 8000 N2H4	MMH: 1 / 1 / 3 ppm / LDL = 0.02 ppm	
300		5 (30)	EC	Polytron 7000 and 8000 CO	CO: 50 / 300 / 1000 ppm	S approx. 1.0
301	0.5 (1.0)	10c (20)	EC	Polytron 7000 and 8000 H2S LC	MeM: 20 / 50 / 100 ppm / LDL = 1 ppm	
302	50 (209)	100 (417)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	SE Ex / PEX 3000 / P 8200 performance approved
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL // 4250 ppm Gas-Library	
			IR	P 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL // 3400 ppm Gas-Library	
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and 8000 OV2	MMA: 20 / 50 / 100 ppm / LDL = 5 ppm	S = 0.5
303			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
304	500 (1796)		CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	P 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
305	500 (1796)		CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	P 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
306	20 (85)	25 (106)	IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
307			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
308			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
309	Methyl propyl ketone CAS 107-87-9 CH ₃ COC ₃ H ₇	MPK C ₅ H ₁₀ O	2-Pentanone Pentan-2-one Propyl methyl ketone 1-Ethyl acetone	86.1 2.97 r 99 v	0.81	102 216 °F	37	7 45 °F	1.5 (54)		1.5 (54)	1.5 (54)		445 IIA T2
310	Methyl-i-propyl ketone CAS 563-80-4 CH ₃ COCH(CH ₃) ₂	MIPK C ₅ H ₁₀ O	3-Methyl-2-butanone 3-Methyl butan-2-one 1,1-Dimethyl acetone i-Propyl methylketone Isopropyl methylketone 2-Acetyl propane	86.1 2.97 r 93 v	0.81	94 201 °F	53	-1 30 °F	1.4 (50)		1 mg/m ³ = 0.28 ppm			475 IIA T1
311	2-Methylpyridine CAS 109-06-8 (C ₆ H ₄ N)CH ₃	C ₆ H ₇ N	Picoline 2-Picoline o-Picoline	93.1 3.21 r 87 v	0.94	128 262 °F	12	27 81 °F	1.4 (54)	1.2 (47)	1 mg/m ³ = 0.26 ppm		1.2 (47)	535 IIA T1
312	3-Methylpyridine CAS 108-99-6 (C ₆ H ₄ N)CH ₃	C ₆ H ₇ N	3-Picoline m-Picoline	93.1 3.21 r	0.96	144 291 °F	6	36 97 °F	1.3 (50)	1.4 (54)	1 mg/m ³ = 0.26 ppm		1.4 (54)	537 IIA T1
313	N-Methyl-2-pyrrolidone CAS 872-50-4 (CH ₂) ₃ CONCH ₃	NMP C ₅ H ₉ NO	1-Methyl-2-pyrrolidinone 1-Methyl-2-pyrrolidone N-Methylpyrrolidone	99.1 3.42 r	1.03	203 397 °F	0.3	86 187 °F	1.5 (62)		1 mg/m ³ = 0.24 ppm			265 IIA T3
314	Methylsilane CAS 992-94-9 SiH ₃ CH ₃	MMS CH ₃ Si	Silaethane Monomethylsilane	46.1 1.59 r	Gas	-58 -72 °F	Gas	Gas	1.3 (25)		1 mg/m ³ = 0.52 ppm			160 T4
315	3-Methylstyrene CAS 100-80-1 CH ₃ C ₆ H ₄ CH=CH ₂	C ₉ H ₁₀	m-Methylstyrene 3-Vinytoluene m-Vinytoluene 1-Methyl-3-vinylbenzene 1-Ethenyl-3-methylbenzene	118.2 4.08 r	0.90	170 338 °F	3.5	45 113 °F	1.9* (94)		1 mg/m ³ = 0.20 ppm			490 T1
316	4-Methylstyrene CAS 622-97-9 CH ₃ C ₆ H ₄ CH=CH ₂	C ₉ H ₁₀	p-Methylstyrene 4-Vinytoluene p-Vinytoluene 1-Methyl-4-vinylbenzene 1-Ethenyl-4-methylbenzene	118.2 4.08 r	0.90	170 338 °F	1.5	46 115 °F	1.1* (54)		1 mg/m ³ = 0.20 ppm			490 T1
317	a-Methyl styrene CAS 98-83-9 C ₆ H ₅ C(CH ₃)=CH ₂	AMS C ₉ H ₁₀	(1-Methyl ethenyl)benzene 2-Phenyl propene i-Propenyl benzene Isopropenyl benzene 1-Methyl-1-phenylethylene	118.2 4.08 r	0.91	166 331 °F	3	40 104 °F	0.9 (44)	0.8 (39)	1.9 (94)	1.9 (94)	0.9 (44)	445 IIB T2
318	Morpholine CAS 110-91-8 (CH ₂) ₄ ONH	C ₄ H ₉ NO	Tetrahydro-1,4-oxazine Diethylene oximide	87.1 3.01 r	1.00	129 264 °F	10.7	31 88 °F	1.8 (65)	1.4 (51)	1.4 (51)	1.4 (51)	1.8 (65)	275 IIA T3
319	Nitric acid CAS 7697-37-2 HNO ₃	HNO ₃	Hydrogen nitrate	63.0 2.17 r	1.52	84 183 °F	56	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
											1 mg/m ³ = 0.38 ppm			

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
309		200 (718)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (\$)	
			IR	P 5700 type 334	100 %LEL (\$)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
310		200 (718)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	P 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
311			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
312			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	40 / 100 %LEL	
			IR	P 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
313	20 (83)		IR	PIR 7000 type 340, P 8700 type 340	10 / 10 %LEL (\$)	only for concentrations < 10 %LEL
314			EC	Polytron 7000 and 8000 Hydride	MMS: 5 / 20 / 20 ppm / LDL = 0.05 ppm	
			EC	Polytron 7000 and 8000 Hydride SC	MMS: 1 / 5 / 20 ppm / LDL = 0.05 ppm	
315	100 (493)	50 (246)	IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL (&)	
			IR	P 5700 type 334	50 + 100 %LEL (&)	
			IR	PIR 7000 type 340, P 8700 type 340	50 / 100 %LEL (&)	
			IR	P 5700 type 340	50 + 100 %LEL (&)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
316	100 (493)	50 (246)	IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL (&)	
			IR	P 5700 type 334	50 + 100 %LEL (&)	
			IR	PIR 7000 type 340, P 8700 type 340	50 / 100 %LEL (&)	
			IR	P 5700 type 340	50 + 100 %LEL (&)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
317	50 (246)	50 (246)	IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	65 / 100 %LEL	
			IR	P 5700 type 340	100 %LEL	
			EC	Polytron 7000 and 8000 OV1	as Aald (50 / 100 / 200 ppm)	S = 0.4 (L)
318	10 (36)	20 (73)	IR	PIR 7000 type 334, P 8700 type 334	40 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and 8000 NH3 LC	as NH3 x 4 (50 / 100 ppm x 4)	S = 0.25 (L)
319	1 (2.6)	2 (5.3)	EC	Polytron 7000 and 8000 AC	Acid: 3 / 10 / 30 ppm / LDL = 0.5 ppm	

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
320	Nitrobenzene CAS 98-95-3 C ₆ H ₅ NO ₂		Nitrobenzol	123.1 4.25 r	1.20	211 412 °F	0.3	88 190 °F	1.4 (72)	1.7 (87)	1.8 (92)	1.8 (92)	1.7 (87)	480 IIB T1
321	Nitrogen dioxide CAS 10102-44-0 NO ₂	NTO NO ₂	Nitrogen peroxide Nitrogen tetroxide	46.0 1.59 r	1.44	21 70 °F	1000	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
322	Nitrogen monoxide CAS 10102-43-9 NO		Nitric oxide	30.0 1.04 r	Gas	-152 -242 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
323	Nitrogen trifluoride CAS 7783-54-2 NF ₃		Trifluoro amine Trifluoro ammonia	71.0 2.45 r	Gas	-129 -200 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
324	2-Nitropropane CAS 79-46-9 (CH ₃) ₂ CHNO ₂	2-NP C ₃ H ₇ NO ₂	Nitro-i-propane Dimethylnitromethane	89.1 3.08 r 124 v	0.99	120 248 °F	17	26 79 °F	2.2 (82)		2.6 (97)	2.6 (97)		425 IIB T2
325	n-Nonane CAS 111-84-2 C ₉ H ₂₀			128.3 4.43 r	0.72	151 304 °F	4.8	31 88 °F	0.7 (37)	0.7 (37)	0.8 (43)	0.8 (43)	0.7 (37)	205 IIA T3
326	5-Nonanone CAS 502-56-7 (C ₄ H ₉) ₂ CO		Nonan-5-on Dibutyl ketone Valerone	142.2 4.91 r	0.82	188 370 °F	0.4	65 149 °F	0.8 (47)					330 T2
327	2,5-Norbornadiene CAS 121-46-0 CH ₂ ((CH=CH)CH) ₂	BCHD C ₇ H ₈	Norborna-2,5-diene Bicycloheptadiene Bicyclo(2.2.1)hepta-2,5-diene	92.1 3.18 r 63 v	0.91	90 194 °F	69	-11 12 °F	1.0 (38)					350 T2
328	1,7-Octadiene CAS 3710-30-3 H ₂ C=CH(CH ₂) ₄ CH=CH ₂		Octa-1,7-diene	110.2 3.80 r 73 v	0.75	117 243 °F	20		0.8 (37)					230 IIB T3
329	Octafluoro cyclobutane CAS 115-25-3 (CF ₂) ₄		Perfluoro cyclobutane Cyclooctafluorobutane RC 318	200.0 6.90 r	Gas	-6.4 20 °F	Gas		n. a.	n. a.	n. a.	n. a.	n. a.	
330	Octafluoro cyclopentene CAS 559-40-0 CF=CF(CF ₂) ₃	PFC C ₅ F ₈	Perfluoro cyclopentene	212.0 7.32 r	1.58	27 81 °F	818	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
331	Octamethyl cyclotetrasiloxane CAS 556-67-2 (CH ₃) ₈ Si ₄ O ₄	OMCTS C ₈ H ₂₄ O ₄ Si ₄	DC244 Fluid	296.6 10.24 r	0.95	175 347 °F	0.9	51 124 °F	0.75* (93)					400 IIB T2
332	Octamethyl trisiloxane CAS 107-51-7 ((CH ₃) ₃ SiO) ₂ Si(CH ₃) ₂	OMTSO C ₈ H ₂₄ O ₂ Si ₃		236.5 8.16 r	0.82	152 306 °F	5		0.9* (89)					

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
320	0.2 (1.0)	1 (5.1)	CT PY	P 5200, P 8200, PEX 3000, SE Ex Pyrolyzer Polytron 7500 NF3	10 %LEL NF3: 50 / 50 / 50 ppm / LDL = 3 ppm	only with 10%-LEL-sensor S = 0.5
321		5c (9.6)	EC EC EC	Polytron 7000 and 8000 NO2 Polytron 5100 NO2 Polytron 3000 NO2	NO2: 5 / 10 / 100 ppm / LDL = 0.3 ppm 5 / 10 / 20 / 50 / 100 ppm 10 ppm	
322		25 (31)	EC EC EC	Polytron 7000 and 8000 NO Polytron 5100 NO Polytron 3000 NO	NO: 30 / 50 / 200 ppm / LDL = 3 ppm 50 / 100 ppm 50 ppm	
323		10 (30)	PY	Pyrolyzer Polytron 7500 NF3	NF3: 5 / 50 / 50 ppm / LDL = 0.3 ppm	
324		25 (93)	IR IR	PIR 7000 type 334, P 8700 type 334 P 5700 type 334	100 %LEL (\$) 100 %LEL (\$)	
325		200 (1069)	CT IR IR IR IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 P 5700 type 334 PIR 7000 type 340, P 8700 type 340 P 5700 type 340 PIR 3000, P 5310, P 8310	10 // 100 %LEL 25 / 100 %LEL // 1750 ppm Gas-Library 50 + 100 %LEL Gas-Library 5 / 100 %LEL // 350 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 100 %LEL	SE Ex / PEX 3000 / P 8200 performance approved PIR 7000 / P 8700 performance approved PIR 7000 / P 8700 performance approved PIR 3000 / P 8310 performance approved
326			IR IR	PIR 7000 type 340, P 8700 type 340 P 5700 type 340	100 %LEL (?) 100 %LEL (?)	
327			IR IR IR IR	PIR 7000 type 334, P 8700 type 334 P 5700 type 334 PIR 7000 type 340, P 8700 type 340 P 5700 type 340	100 %LEL (?) 100 %LEL (?) 100 %LEL (?) 100 %LEL (?)	
328			IR IR IR IR IR	PIR 7000 type 334, P 8700 type 334 P 5700 type 334 PIR 7000 type 340, P 8700 type 340 P 5700 type 340 PIR 3000, P 5310, P 8310	35 / 100 %LEL 50 + 100 %LEL 15 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL (?)	
329			PY	Pyrolyzer Polytron 7500 PFC	50 ppm / LDL = 1 ppm	S = 1.1
330		2 (18)	PY	Pyrolyzer Polytron 7500 PFC	C5F8: 2 / 30 ppm / LDL = 0.5 ppm	S = 1.0
331			IR IR IR IR IR	PIR 7000 type 334, P 8700 type 334 P 5700 type 334 PIR 7000 type 340, P 8700 type 340 P 5700 type 340 PIR 3000, P 5310, P 8310	30 / 100 %LEL 50 + 100 %LEL 25 / 100 %LEL 50 + 100 %LEL 100 %LEL	
332			IR IR IR IR	PIR 7000 type 334, P 8700 type 334 P 5700 type 334 PIR 7000 type 340, P 8700 type 340 P 5700 type 340	20 / 100 %LEL 20 + 50 + 100 %LEL 10 / 100 %LEL 20 + 50 + 100 %LEL	

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
333	n-Octane CAS 111-65-9 C ₈ H ₁₈	C ₈ H ₁₈		114.2 3.94 r 81 v	0.70 259 °F 1 ppm = 4.76 mg/m ³	126 54 °F	14	12 54 °F	0.8 (38)	0.8 (38)	1.0 (48)	1.0 (48)	0.8 (38)	205 IIA T3
334	1-Octene CAS 111-66-0 CH ₂ =CHC ₈ H ₁₃	C ₈ H ₁₆	1-Octylene 1-Caprylene	112.2 3.87 r 69 v	0.71 250 °F 1 ppm = 4.68 mg/m ³	121 70 °F	23	21 70 °F	0.7 (33)		1 mg/m ³ = 0.21 ppm			240 T3
335	Oxygen CAS 7782-44-7 O ₂	O ₂	R732	32.0 1.10 r	Gas -183 -297 °F 1 ppm = 1.33 mg/m ³	Gas		n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
336	Ozone CAS 10028-15-6 O ₃	O ₃		48.0 1.66 r	Gas -112 -170 °F 1 ppm = 2.00 mg/m ³	Gas		n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
337	Paraldehyde CAS 123-63-7 (CH ₃ CHO) ₃	PCHO C ₆ H ₁₂ O ₃	Paracetaldehyde 2.4.6-Trimethyl-1.3.5-trioxane p-Acetyldehyde	132.2 4.56 r 108 v	0.99 255 °F 1 ppm = 5.51 mg/m ³	124 81 °F	10	27 81 °F	1.3 (72)	1.3 (72)		1.3 (72)		235 IIA T3
338	1.3-Pentadiene trans CAS 2004-70-8 CH ₂ =CHCH=CHCH ₃	C ₅ H ₈	Penta-1.3-diene trans Piperylene Piperylene trans (E)-1.3-Penadiene 1-Methylbutadiene trans	68.1 2.35 r 76 v	0.67 108 °F 1 ppm = 2.84 mg/m ³	42 -22 °F	452	<-30 <-22 °F	1.2 (34)		1 mg/m ³ = 0.35 ppm		1.2 (34)	
339	1.1.1.3.3-Pentafluoro butane CAS 406-58-6 CF ₃ CH ₂ CF ₂ CH ₃	C ₄ H ₅ F ₅	HFC 365mfc R365	148.1 5.11 r 281 v	1.25 104 °F 1 ppm = 6.17 mg/m ³	40 -17 °F	433	<-27 <-17 °F	3.8 (234)		1 mg/m ³ = 0.16 ppm			590 T1
340	Pentafluoroethane CAS 354-33-6 CF ₃ CHF ₂	C ₂ HF ₅	R125	120.0 4.14 r	Gas -48.5 -55 °F 1 ppm = 5.00 mg/m ³	Gas		n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
341	Pentafluoropropane CAS 460-73-1 CF ₃ CH ₂ CHF ₂	C ₃ H ₃ F ₅	1.1.1.3.3-Pentafluoropropane R245fa	134.1 4.63 r	Gas 15.3 60 °F 1 ppm = 5.59 mg/m ³	Gas		n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
342	2.2.4.6.6-Pentamethylheptane CAS 13475-82-6 (CH ₃) ₃ CCH ₂) ₂ CHCH ₃	iC12 C ₁₂ H ₂₆	i-Dodecane Isododecane	170.3 5.88 r	0.75 180 356 °F 1 ppm = 7.10 mg/m ³	1 109 °F	1	43 109 °F	0.5 (35)		1 mg/m ³ = 0.14 ppm			430 IIA T2

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
333	500 (2379)	500 (2379)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	SE Ex / PEX 3000 / P 8200 performance approved PIR 7000 / P 8700 performance approved
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL // 2000 ppm Gas-Library	
			IR	P 5700 type 334	50 + 100 %LEL Gas-Library	PIR 7000 / P 8700 performance approved
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL // 400 ppm Gas-Library	
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
IR	PIR 3000, P 5310, P 8310	100 %LEL	PIR 3000 / P 8310 performance approved			
334			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
IR	PIR 3000, P 5310, P 8310	100 %LEL				
335			EC	Polytron 7000 and 8000 O2	5 / 25 / 100 vol%	
			EC	Polytron 7000 and 8000 O2 LS	5 / 10 / 25 vol%	
			EC	Polytron 5100 O2 LS	25 vol-%	
			EC	Polytron 3000 O2	5 / 25 / 100 vol%	
			EC	Polytron 3000 O2 LS	25 vol%	
			EC	Polytron 2000 O2	25 vol%	
336	0.1 (0.20)		EC	Polytron 7000 and 8000 O3	O3: 0.5 / 1 / 5 ppm / LDL = 0.01 ppm	
			EC	Polytron 3000 O3	0.5 ppm	
337			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL (?)	
338			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	P 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	25 / 100 %LEL	
			IR	P 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
339			IR	PIR 7000 type 334, P 8700 type 334	45 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	80 / 100 %LEL (&)	
			IR	P 5700 type 340	100 %LEL (&)	
340			PY	Pyrolyzer Polytron 7500 PFC	60 ppm / LDL = 2 ppm	S = 0.4
341			IR	PIR 7000 type 334, P 8700 type 334	1.7 / 3.0 vol%	
			IR	P 5700 type 334	2.0 vol%	
			IR	PIR 7000 type 340, P 8700 type 340	2.4 / 3.0 vol%	
342			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL // 1250 ppm Gas-Library	PIR 7000 / P 8700 performance approved
			IR	P 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 500 ppm Gas-Library	PIR 7000 / P 8700 performance approved
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
343	n-Pentane CAS 109-66-0 C ₅ H ₁₂	C ₅ H ₁₂	Amyl hydride	72.2 2.49 r 79 v	0.63 97 °F 1 ppm = 3.01 mg/m ³	36	562	<-20 <-4 °F	1.1 (33)	1.1 (33)	1.5 (45)	1.5 (45)	1.4 (42)	260 IIA T3
344	Pentanoic acid CAS 109-52-4 CH ₃ (CH ₂) ₃ COOH	C ₅ H ₁₀ O ₂	Valeric acid Butyl carbonic acid	102.1 3.52 r	0.94 367 °F 1 ppm = 4.25 mg/m ³	186	0.2	87 189 °F	1.6 (68)			1.6 (68)		375 IIA T2
345	3-Pentanol CAS 584-02-1 C ₂ H ₅ CH(OH)C ₂ H ₅	C ₅ H ₁₂ O	Pentan-3-ol 3-Amyl alcohol Diethyl carbinol 1-Ethyl-1-propanol	88.2 3.04 r	0.82 241 °F 1 ppm = 3.68 mg/m ³	116	7.6	30 86 °F	1.2 (44)			1.2 (44)		360 IIA T2
346	1-Pentene CAS 109-67-1 C ₃ H ₇ CH=CH ₂	C ₅ H ₁₀	n-Amylene n-Pentylene Propylethylene	70.1 2.42 r 96 v	0.64 86 °F 1 ppm = 2.92 mg/m ³	30	704	<-20 <-4 °F	1.4 (41)			1.5 (44)		280 T3
347	Phosgene CAS 75-44-5 COCl ₂	CG CCl ₂ O	Carbonyl chloride Carbon oxychloride Chloroformyl chloride	98.9 3.41 r	Gas 46 °F 1 ppm = 4.12 mg/m ³	8	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
348	Phosphine CAS 7803-51-2 PH ₃	H ₃ P	Hydrogen phosphide Phosphorus hydride Phosphorus trihydride	34.0 1.17 r	Gas -126 °F 1 ppm = 1.42 mg/m ³	-88	Gas		1.6 (23)			1.6 (23)		
349	Phosphorus oxychloride CAS 10025-87-3 POCl ₃	POCL Cl ₃ OP	Phosphorus chloride Phosphorus oxytrichloride Phosphoryl chloride Trichlorophosphorus oxide Trichlorophosphine oxide	153.3 5.29 r	1.68 221 °F 1 ppm = 6.39 mg/m ³	105	36	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
350	Phosphorus trichloride CAS 7719-12-2 PCl ₃	Cl ₃ P	Phosphorus chloride Trichlorophosphine	137.3 4.74 r	1.57 169 °F 1 ppm = 5.72 mg/m ³	76	127	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
351	α-Pinene CAS 80-56-8 C ₁₀ H ₁₆	C ₁₀ H ₁₆	2.6.6-Trimethylbicyclo(3.1.1)hept-2-ene	136.2 4.70 r	0.86 311 °F 1 ppm = 5.68 mg/m ³	155	5	33 91 °F	0.8* (45)			1 mg/m ³ = 0.18 ppm		255 T3
352	Piperidine CAS 110-89-4 (CH ₂) ₅ NH	PIP C ₅ H ₁₁ N	Hexahydropyridine Pentamethylene imine Azacyclohexane	85.2 2.94 r 80 v	0.86 223 °F 1 ppm = 3.55 mg/m ³	106	33	4 39 °F	1.3 (46)			1 mg/m ³ = 0.28 ppm		IIA
353	Propane CAS 74-98-6 C ₃ H ₈	C ₃ H ₈	Dimethyl methane Propyl hydride R290	44.1 1.52 r	Gas -42 °F 1 ppm = 1.84 mg/m ³	-42	Gas	Gas	1.7 (31)	1.7 (31)	2.1 (39)	2.1 (39)	1.7 (31)	470 IIA T1

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
343	1000 (3008)	1000 (3008)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	SE Ex / PEX 3000 / P 8200 performance approved PIR 7000 / P 8700 performance approved
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL // 2750 ppm Gas-Library	
			IR	P 5700 type 334	50 + 100 %LEL Gas-Library	PIR 7000 / P 8700 performance approved
			IR	PIR 7000 type 340, P 8700 type 340	8 / 100 %LEL // 700 ppm Gas-Library	
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	PIR 3000 / P 8310 performance approved CSF = 0.79 (Propane = 1.00) / LEL = 1.1
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
OP	Polytron Pulsar 2	1 // 4 / 8 LELm				
344			IR	PIR 7000 type 334, P 8700 type 334	25 / 25 %LEL (&)	only for concentrations < 25 %LEL
			IR	PIR 7000 type 340, P 8700 type 340	25 / 25 %LEL (&)	only for concentrations < 25 %LEL
345			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (\$)	
			IR	P 5700 type 340	100 %LEL (\$)	
346			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 2800 ppm Gas-Library	
			IR	P 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 1400 ppm Gas-Library	
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
IR	PIR 3000, P 5310, P 8310	100 %LEL (!)				
347	0.1 (0.41)	0.1 (0.41)	EC	Polytron 7000 and 8000 COCl ₂	Phsg: 0.1 / 1 / 20 ppm / LDL = 0.05 ppm	
348	0.1 (0.14)	0.3 (0.43)	EC	Polytron 7000 and 8000 PH ₃ /AsH ₃	PH ₃ : 0.3 / 1 / 20 ppm / LDL = 0.02 ppm	
			EC	Polytron 7000 and 8000 Hydride	PH ₃ : 0.3 / 1 / 20 ppm / LDL = 0.03 ppm	
			EC	Polytron 7000 and 8000 Hydride SC	PH ₃ : 0.3 / 1 / 1 ppm / LDL = 0.01 ppm	
			EC	Polytron 3000 PH ₃	0.3 / 1 / 10 ppm	
349	0.2 (1.3)	0.1 (0.64)	EC	Polytron 7000 and 8000 AC	POC: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
			EC	Polytron 7000 and 8000 HCl	POC: 20 / 30 / 100 ppm / LDL = 1.5 ppm	
350	0.5 (2.9)	0.5 (2.9)	EC	Polytron 7000 and 8000 AC	PCI ₃ : 3 / 10 / 30 ppm / LDL = 0.5 ppm	
			EC	Polytron 7000 and 8000 HCl	PCI ₃ : 5 / 10 / 20 ppm / LDL = 0.2 ppm	
351			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	P 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
352			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
353	1000 (1837)	1000 (1837)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	SE Ex / PEX 3000 / P 8200 performance approved PIR 7000 / P 8700 performance approved
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 3400 ppm Gas-Library	
			IR	P 5700 type 334	20 + 50 + 100 %LEL Gas-Library	PIR 7000 / P 8700 performance approved
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL // 850 ppm Gas-Library	
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	PIR 3000 / P 8310 performance approved CSF = 1.00 (Propane = 1.00) / LEL = 1.7
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
OP	Polytron Pulsar 2	1 // 4 / 8 LELm				

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
354	i-Propanol CAS 67-63-0 (CH ₃) ₂ CHOH	IPA C ₃ H ₈ O	Isopropanol i-Propyl alcohol Isopropyl alcohol 2-Propanol Propan-2-ol Dimethyl carbinol	60.1 2.07 r 96 v	0.78	82 180 °F	43	12 54 °F	2.0 (50)	2.0 (50)	2.0 (50)	2.0 (50)	2.0 (50)	425 IIA T2
355	n-Propanol CAS 71-23-8 C ₃ H ₇ OH	NPA C ₃ H ₈ O	n-Propyl alcohol 1-Propanol Ethyl carbinol	60.1 2.07 r 98 v	0.80	97 207 °F	20	22 72 °F	2.1 (53)	2.1 (53)	2.2 (55)	2.2 (55)	2.2 (55)	385 IIB T2
356	Propargyl alcohol CAS 107-19-7 HCCCH ₂ OH	C ₃ H ₄ O	2-Propyn-1-ol Prop-2-yn-1-ol Ethylnyl carbinol 2-Propynyl alcohol	56.1 1.94 r	0.95	115 239 °F	10	33 91 °F	2.8 (65)	2.4 (56)			2.4 (56)	365 IIB T2
357	i-Propenyl acetate CAS 108-22-5 CH ₃ COOC(CH ₃)=CH ₂	C ₅ H ₈ O ₂	1-Methylvinyl acetate 1-Propen-2-ol acetate Acetic acid i-propenyl ester Isopropenyl acetate	100.1 3.46 r 110 v	0.91	97 207 °F	23	4 39 °F	1.6 (67)					395 IIA T2
358	Propionaldehyde CAS 123-38-6 C ₂ H ₅ CHO	C ₃ H ₆ O	Propionic aldehyde Propanal Propyl aldehyde Methylacetaldehyde	58.1 2.01 r 104 v	0.80	49 120 °F	341	<-20 <-4 °F	2.3 (56)	2.0 (48)		2.6 (63)	2.0 (48)	190 IIB T4
359	Propionic acid CAS 79-09-4 C ₂ H ₅ COOH	C ₃ H ₆ O ₂	Propanoic acid Methylacetic acid Carboxyethane Ethylformic acid Ethanecarboxylic acid	74.1 2.56 r	0.99	141 286 °F	3.5	52 126 °F	2.9 (90)	2.1 (65)		2.9 (90)	3.1 (96)	485 IIA T1
360	Propionic acid anhydride CAS 123-62-6 (C ₂ H ₅ CO) ₂ O	C ₆ H ₁₀ O ₃	Propionic anhydride Propanoic acid anhydride Propanoic anhydride Methylacetic anhydride	130.1 4.49 r	1.02	167 333 °F	1.4	74 165 °F				1.3 (70)		315 T2
361	2-Propoxyethanol CAS 2807-30-9 C ₃ H ₇ OCH ₂ CH ₂ OH	EGnPE C ₅ H ₁₂ O ₂	Ethylene glycol monopropyl ether Propylglycol Propyl cellosolve	104.2 3.60 r	0.91	150 302 °F	1.7	51 124 °F	1.45 (63)					230 IIB T3
362	i-Propoxyethanol CAS 109-59-1 (CH ₃) ₂ CHOC ₂ H ₄ OH	EGiPE C ₅ H ₁₂ O ₂	Ethylene glycol i-propyl ether i-Propyl glycol Isopropoxyethanol Isopropyl glycol Isopropyl oxitol 4-Methyl-3-oxa-1-pentanol	104.2 3.60 r	0.90	142 288 °F	3.5	43 109 °F	1.4 (61)					IIB

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
354	200 (501)	400 (1002)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	SE Ex / PEX 3000 / P 8200 performance approved PIR 7000 / P 8700 performance approved
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 4000 ppm Gas-Library	
			IR	P 5700 type 334	20 + 50 + 100 %LEL Gas-Library	PIR 7000 / P 8700 performance approved
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 2000 ppm Gas-Library	
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	PIR 3000 / P 8310 performance approved S = 0.3
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
EC	Polytron 7000 and 8000 OV1	IPA: 100 / 200 / 300 ppm / LDL = 10 ppm				
355		200 (501)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	S = 0.85 (L)
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
EC	Polytron 7000 and 8000 OV1	as EtOH (100 / 200 / 300 ppm)				
356	2 (4.7)	1 (2.3)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL (?)	
357	10 (42)		IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	P 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
358			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
359	10 (31)	10 (31)	IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL	
			IR	P 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (\$)	
360			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	35 / 100 %LEL	
			IR	P 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
361	20 (87)		IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL	
			IR	P 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
362	5 (22)		IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
363	1-Propoxy-2-propanol CAS 1569-01-3 C ₃ H ₇ OCH ₂ CH(OH)CH ₃	PnPGE C ₆ H ₁₄ O ₂	1-Propoxypropan-2-ol Propylene glycol propyl ether 2-Propoxy-1-methyl ethanol	118.2 4.08 r	0.89	150 302 °F	2.27	48 118 °F	1.2 (59)		1 mg/m ³ = 0.20 ppm			
364	i-Propyl acetate CAS 108-21-4 CH ₃ COOCH(CH ₃) ₂	C ₆ H ₁₀ O ₂	Isopropyl acetate Acetic acid i-propyl ester Acetic acid 1-methylethyl ester 2-Acetoxypropane 2-Propyl acetate	102.1 3.52 r 130 v	0.88	89 192 °F	62	2 36 °F	1.8 (77)	1.7 (72)	1.8 (77)	1.8 (77)	1.8 (77)	425 IIA T2
365	n-Propyl acetate CAS 109-60-4 CH ₃ COOC ₃ H ₇	C ₆ H ₁₀ O ₂	Acetic acid propyl ester Ethanoic acid propyl ester 1-Acetoxypropane	102.1 3.52 r 122 v	0.89	102 216 °F	33	10 50 °F	1.7 (72)	1.7 (72)	1.7 (72)	1.7 (72)	1.7 (72)	455 IIA T1
366	i-Propylamine CAS 75-31-0 (CH ₃) ₂ CHNH ₂	C ₃ H ₉ N	2-Aminopropane 2-Propylamine 2-Propanamine Isopropylamine	59.1 2.04 r 107 v	0.69	32 90 °F	633	<-20 <-4 °F	2.0 (49)	2.3 (57)		2.3 (57)	2.3 (57)	400 IIA T2
367	n-Propylamine CAS 107-10-8 C ₃ H ₇ NH ₂	C ₃ H ₉ N	1-Aminopropane 1-Propylamine 1-Propanamine	59.1 2.04 r 102 v	0.72	49 120 °F	339	<-20 <-4 °F	2.0 (49)	2.0 (49)		2.0 (49)	2.0 (49)	320 IIA T2
368	n-Propylbenzene CAS 103-65-1 C ₆ H ₅ C ₃ H ₇	C ₉ H ₁₂	1-Phenylpropane	120.2 4.15 r	0.86	159 318 °F	3.5	39 102 °F	0.8 (40)			0.8 (40)		450 IIA T2
369	i-Propyl chloride CAS 75-29-6 (CH ₃) ₂ CHCl	IPC C ₃ H ₇ Cl	2-Chloropropane Isopropyl chloride	78.5 2.71 r 159 v	0.86	35 95 °F	567	<-20 <-4 °F	2.8 (92)	2.8 (92)		2.8 (92)	2.8 (92)	590 IIA T1
370	n-Propylchloride CAS 540-54-5 C ₃ H ₇ Cl	C ₃ H ₇ Cl	1-Chloropropane R280	78.5 2.71 r 143 v	0.89	47 117 °F	373	<-20 <-4 °F	2.6 (85)	2.4 (79)		2.6 (85)	2.4 (79)	520 IIA T1

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
363			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
364		250 (1064)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
365		200 (851)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
366	5 (12)	5 (12)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and 8000 NH3 LC	i-PA: 100 / 200 ppm / LDL = 10 ppm	
367			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
368			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
369			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL	
			IR	P 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
370			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
371	Propylene CAS 115-07-1 CH ₂ =CHCH ₃	C ₃ H ₆	Propene Methylethylene Methylethene R1270	42.1 1.45 r	Gas	-48 -54 °F	Gas	Gas	2.0 (35)	2.0 (35)		2.0 (35)	2.0 (35)	485 IIA T1
372	1,2-Propylenediamine CAS 78-90-0 CH ₃ CH(NH ₂)CH ₂ NH ₂	PDA C ₃ H ₁₀ N ₂	1,2-Diaminopropane 1,2-Propanediamine	74.1 2.56 r	0.87	119 246 °F	4	33 91 °F	2.2* (68)					1 mg/m ³ = 0.32 ppm
373	Propylene oxide CAS 75-56-9 CH ₃ CHCH ₂ O	PO C ₃ H ₆ O	1,2-Epoxy propane 1,2-Propene oxide Methyloxirane Methyl ethylene oxide	58.1 2.01 r 83 v	0.83	34 93 °F	588	<-20 <-4 °F	1.9 (46)	1.9 (46)	2.3 (56)	2.3 (56)	1.9 (46)	430 IIB T2
374	n-Propylformate CAS 110-74-7 HCOOC ₃ H ₇	C ₄ H ₈ O ₂	Formic acid propylester Methanoic acid propylester	88.1 3.04 r 193 v	0.91	81 178 °F	84	-3 27 °F	2.2 (81)					360 IIA T2
375	i-Propyl mercaptan CAS 75-33-2 (CH ₃) ₂ CHSH	iPM C ₃ H ₈ S	2-Propanethiol 2-Propyl mercaptan Isopropyl mercaptan	76.2 2.63 r 104 v	0.82	53 127 °F	300	-20 -4 °F	1.8 (57)					1 mg/m ³ = 0.31 ppm
376	n-Propyl mercaptan CAS 107-03-9 C ₃ H ₇ SH	nPM C ₃ H ₈ S	1-Propanethiol 1-Propyl mercaptan 1-Mercaptopropane	76.2 2.63 r 102 v	0.84	68 154 °F	165	-15 5 °F	1.8 (57)					1 mg/m ³ = 0.31 ppm IIA
377	i-Propyl nitrate CAS 1712-64-7 (CH ₃) ₂ CHONO ₂	C ₃ H ₇ NO ₃	Nitric acid i-propylester Nitric acid 1-methylethylester Isopropyl nitrate	105.1 3.63 r	1.04	101 214 °F	36	11 52 °F		2.0 (88)			2.0 (88)	175 IIB T4
378	Propyne CAS 74-99-7 CH ₃ CCH	C ₃ H ₄	Methyl acetylene Allylene 1-Propyne Propine	40.1 1.38 r	Gas	-23 -9 °F	Gas		1.8 (30)	1.7 (28)	1.7 (28)	1.7 (28)	1.7 (28)	340 IIB T2
379	Pyridine CAS 110-86-1 C ₅ H ₅ N	C ₅ H ₅ N	Azine Azabenzene	79.1 2.73 r 86 v	0.98	115 239 °F	20	17 63 °F	1.7 (56)	1.7 (56)	1.8 (59)	1.8 (59)	1.7 (56)	550 IIA T1
380	Sevoflurane CAS 28523-86-6 CH ₂ F-O-CH(CF ₃) ₂	C ₄ H ₃ F ₇ O	Hexafluoro-2-(fluoromethoxy)propane Fluoromethyl hexafluoro-2-propyl ether	200.1 6.91 r	1.50	58.5 137 °F	209	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
381	Silane CAS 7803-62-5 SiH ₄	H ₄ Si	Monosilane Silicon tetrahydride Silicane Silicon hydride	32.1 1.11 r	Gas	-112 -170 °F	Gas						1.4 (19)	1 mg/m ³ = 0.75 ppm
382	Silicon tetrachloride CAS 10026-04-7 SiCl ₄	Cl ₄ Si	Tetrachlorosilane	169.9 5.86 r	1.48	57 135 °F	260	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
														1 mg/m ³ = 0.14 ppm

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
371			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	SE Ex / PEX 3000 / P 8200 performance approved
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 4000 ppm Gas-Library	PIR 7000 / P 8700 performance approved
			IR	P 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL // 3000 ppm Gas-Library	PIR 7000 / P 8700 performance approved
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	PIR 3000 / P 8310 performance approved
			EC	Polytron 7000 and 8000 OV1	C3H6: 30 / 50 / 100 ppm / LDL = 5 ppm	S = 0.7
			OP	Polytron Pulsar 2	1 // 4 / 8 LELm	CSF = 0.83 (Propane = 1.00) / LEL = 2.0
372			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
373	2 (4.8)	100 (242)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	SE Ex / PEX 3000 / P 8200 performance approved
			IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL // 2850 ppm Gas-Library	PIR 7000 / P 8700 performance approved
			IR	P 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL // 2850 ppm Gas-Library	PIR 7000 / P 8700 performance approved
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and 8000 OV1	PO: 20 / 50 / 200 ppm / LDL = 5 ppm	S = 0.8
374			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
375			EC	Polytron 7000 and 8000 H2S LC	iPM: 20 / 50 / 100 ppm / LDL = 1 ppm	
376		0.5c (1.6)	EC	Polytron 7000 and 8000 H2S LC	nPM: 20 / 50 / 100 ppm / LDL = 1 ppm	
377			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
378		1000 (1671)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
379		5 (16)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
380			PY	Pyrolyzer Polytron 7500 PFC	10 ppm / LDL = 0.2 ppm	S = 2.4
381		5 (6.7)	EC	Polytron 7000 and 8000 Hydride	SiH4: 5 / 5 / 50 ppm / LDL = 0.05 ppm	
			EC	Polytron 7000 and 8000 Hydride SC	SiH4: 1 / 5 / 20 ppm / LDL = 0.05 ppm	
382			EC	Polytron 7000 and 8000 AC	TeCS: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
			EC	Polytron 7000 and 8000 HCl	TeCS: 5 / 10 / 20 ppm / LDL = 0.2 ppm	

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
383	Silicon tetrafluoride CAS 7783-61-1 SiF ₄	F ₄ Si	Tetrafluorosilane	104.1 3.59 r	Gas	-65 -85 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
											1 mg/m ³ = 0.23 ppm			
384	Styrene CAS 100-42-5 C ₆ H ₅ CH=CH ₂	C ₆ H ₈	Styrol Vinyl benzene Ethenyl benzene Phenylethylene Cinnamene	104.2 3.60 r	0.91	145 293 °F	7	32 90 °F	1.0 (43)	1.0 (43)	0.9 (39)	0.9 (39)	1.1 (48)	490 IIA T1
											1 mg/m ³ = 0.23 ppm			
385	Sulfur dioxide CAS 7446-09-5 SO ₂	O ₂ S	Sulfurous oxide R764	64.1 2.21 r	Gas	-10 14 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
											1 mg/m ³ = 0.37 ppm			
386	Terpineol CAS 8000-41-7 (CH ₃) ₂ C(OH)C ₆ H ₈ CH ₃	C ₁₀ H ₁₈ O	2(4-Methylcyclohex-3-ene-1-yl)propan-2-ol 4-Menth-1-ene-8-ol 1-Methyl-4-isopropyl-1-cyclohexene-8-ol	154.3 5.33 r	0.93	215 419 °F	0.24							
											1 mg/m ³ = 0.16 ppm			
387	Tetrachloroethene CAS 127-18-4 C ₂ Cl ₄	PER C ₂ Cl ₄	Perchloroethylene Tetrachloroethylene Ethylene tetrachloride	165.8 5.72 r	1.62	121 250 °F	19	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
											1 mg/m ³ = 0.14 ppm			
388	Tetraethyl orthosilicate CAS 78-10-4 (C ₂ H ₅ O) ₄ Si	TEOS C ₈ H ₂₀ O ₄ Si	Tetraethoxysilane Silicic acid tetraethylester Tetraethyl silicate Ethyl silicate Ethyl orthosilicate	208.3 7.19 r	0.93	169 336 °F	9.2	37 99 °F	0.8 (69)	0.45 (39)		1.3 (113)		230 IIB T3
											1 mg/m ³ = 0.12 ppm			
389	1.1.1.2-Tetrafluoro ethane CAS 811-97-2 CF ₃ CH ₂ F	C ₂ H ₂ F ₄	Norflurane R134a	102.0 3.52 r	Gas	-26 -15 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
											1 mg/m ³ = 0.24 ppm			
390	Tetrafluoro ethene CAS 116-14-3 C ₂ F ₄	PFE C ₂ F ₄	Perfluoroethylene	100.0 3.45 r	Gas	-76 -105 °F	Gas	Gas	10.5 (438)	10.0 (417)		10.0 (417)	10.0 (417)	240 IIA T3
											1 mg/m ³ = 0.24 ppm			
391	Tetrafluoropropene CAS 754-12-1 H ₂ C=CF-CF ₃	C ₃ H ₂ F ₄	2.3.3.3-Tetrafluoro-1-propene 2.3.3.3-Tetrafluoroprop-1-ene Tetrafluoropropylene HFO-1234yf	114.0 3.94 r	Gas	-29.4 -21 °F	Gas		6.2* (295)					
											1 mg/m ³ = 0.21 ppm			
392	1.3.3.3-Tetrafluoroprop-1-ene trans CAS 1645-83-6 CF ₃ CH=CHF	C ₃ H ₂ F ₄	HFO-1234ze HFC-1234ze R1234ze	114.0 3.94 r	Gas	-19 -2 °F	Gas							
											1 mg/m ³ = 0.21 ppm			
393	Tetrahydro benzaldehyde CAS 100-50-5 C ₆ H ₉ CHO	THB C ₇ H ₁₀ O	1.2.3.6-Tetrahydrobenzaldehyde 3-Cyclohexene-1-aldehyde 3-Cyclohexene-1-carbaldehyde 4-Formyl-1-cyclohexene	110.2 3.80 r	0.97	164 327 °F	2.1	47 117 °F	1.1** (51)					
											1 mg/m ³ = 0.22 ppm			
394	Tetrahydrofuran CAS 109-99-9 (CH ₂) ₄ O	THF C ₄ H ₈ O	Diethylene monoxide Tetramethylene oxide 1.4-Epoxybutane	72.1 2.49 r 76 v	0.89	64 147 °F	173	-20 -4 °F	1.5 (45)	1.5 (45)	2.0 (60)	2.0 (60)	1.5 (45)	230 IIB T3
											1 mg/m ³ = 0.33 ppm			

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
383			EC	Polytron 7000 and 8000 AC	SiF4: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
384	20 (87)	100 (434)	CT IR IR IR EC	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 P 5700 type 334 PIR 3000, P 5310, P 8310 Polytron 7000 and 8000 OV2	10 // 100 %LEL 45 / 100 %LEL // 3850 ppm Gas-Library 50 + 100 %LEL Gas-Library 100 %LEL Styr: 20 / 50 / 100 ppm / LDL = 5 ppm	polymerizing/sensor poison PIR 7000 / P 8700 performance approved S = 0.5
385	1 (2.7)	5 (13)	EC EC EC	Polytron 7000 and 8000 SO2 Polytron 5100 SO2 Polytron 3000 SO2	SO2: 5 / 10 / 100 ppm / LDL = 0.5 ppm 5 / 10 / 20 / 50 / 100 ppm 10 ppm	
386			IR IR IR IR	PIR 7000 type 334, P 8700 type 334 P 5700 type 334 PIR 7000 type 340, P 8700 type 340 P 5700 type 340	70 / 100 %LEL 100 %LEL 15 / 100 %LEL 20 + 50 + 100 %LEL	
387	20 (138)	100 (691)	PY	Pyrolyzer Polytron 7500 PFC	30 ppm / LDL = 0.5 ppm	S = 1.1
388	1.4 (12)	100 (868)	IR IR IR IR IR	PIR 7000 type 334, P 8700 type 334 P 5700 type 334 PIR 7000 type 340, P 8700 type 340 P 5700 type 340 PIR 3000, P 5310, P 8310	25 / 100 %LEL 50 + 100 %LEL 10 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL (?)	
389	1000 (4250)		IR IR IR IR PY	PIR 7000 type 334, P 8700 type 334 P 5700 type 334 PIR 7000 type 340, P 8700 type 340 P 5700 type 340 Pyrolyzer Polytron 7500 PFC	1.5 / 10.0 vol% // 15000 ppm Gas-Library 2.0 + 5.0 + 10.0 vol% Gas-Library 2.0 / 10.0 vol% // 20000 ppm Gas-Library 2.0 + 5.0 + 10.0 vol% Gas-Library TeFE: 50 / 50 ppm / LDL = 1 ppm	
390			PY	Pyrolyzer Polytron 7500 PFC	30 ppm / LDL = 0.5 ppm	S = 1.0
391			PY	Pyrolyzer Polytron 7500 PFC	30 ppm / LDL = 0.5 ppm	S = 0.6
392			IR IR PY	PIR 7000 type 334, P 8700 type 334 P 5700 type 334 Pyrolyzer Polytron 7500 PFC	80 / 100 %LEL (&) 100 %LEL (&) 30 ppm / LDL = 0.5 ppm	S = 0.9
393			IR IR IR IR	PIR 7000 type 334, P 8700 type 334 P 5700 type 334 PIR 7000 type 340, P 8700 type 340 P 5700 type 340	60 / 100 %LEL 100 %LEL 25 / 100 %LEL 50 + 100 %LEL	
394	50 (150)	200 (601)	CT IR IR IR IR IR EC	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 P 5700 type 334 PIR 7000 type 340, P 8700 type 340 P 5700 type 340 PIR 3000, P 5310, P 8310 Polytron 7000 and 8000 OV1	10 // 100 %LEL 15 / 100 %LEL // 2250 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 5 / 100 %LEL // 750 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 100 %LEL THF: 30 / 50 / 200 ppm / LDL = 5 ppm	S = 0.75

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
395	Tetrahydronaphthalene CAS 119-64-2 C ₁₀ H ₁₂	C ₁₀ H ₁₂	1,2,3,4-Tetrahydronaphthalene Tetralin	132.2 4.56 r	0.97	208 406 °F	0.24	71 160 °F	0.8 (44)			0.8 (44)		390 T2
396	Tetrahydrothiophene CAS 110-01-0 C ₄ H ₆ S	THT C ₄ H ₆ S	Tetramethylene sulfide Thiocyclopentane Thiophane	88.2 3.04 r 61 v	1.00	121 250 °F	19	13 55 °F	1.1 (40)	1.1 (40)			1.1 (40)	200 IIA T4
397	Tetrakisdimethylaminotitanium CAS 3275-24-9 (CH ₃) ₂ N) ₄ Ti	TDMAT C ₈ H ₂₄ N ₄ Ti	Titanium tetrakis(dimethylammonium) Titanium dimethylamide	224.2 7.74 r	0.95	n. a. 32 °F	0.1				1 mg/m ³ = 0.11 ppm			
398	1,1,3,3-Tetramethyldisiloxane CAS 3277-26-7 (CH ₃ SiHCH ₃) ₂ O	TMDSO C ₄ H ₁₄ OSi ₂	2,4-Dimethyl-3-oxa-2,4-disilapentane	134.3 4.64 r	0.76	71 160 °F	150	<-20 <-4 °F	0.8* (45)		1 mg/m ³ = 0.18 ppm			240 IIB T3
399	Tetramethyldivinyl disilazane CAS 7691-02-3 (CH ₂ =CH-Si(CH ₃) ₂) ₂ NH	DVTMDS C ₈ H ₁₉ NSi ₂	1,1,3,3-Tetramethyl-1,3-divinylsilazane 1,3-Divinyltetramethyldisilazane 1,3-Divinyl-1,1,3,3-tetramethyldisilazane	185.4 6.40 r	0.82	160 320 °F	14				1 mg/m ³ = 0.13 ppm			
400	Tetramethyl ethylene diamine CAS 110-18-9 (CH ₃) ₂ NC ₂ H ₄ N(CH ₃) ₂	TEMED C ₆ H ₁₆ N ₂	1,2-Bis-(dimethyl amino)-ethane	116.2 4.01 r 94 v	0.77	120 248 °F	13.3	19 66 °F	1.0 (48)		1 mg/m ³ = 0.21 ppm			145 IIA T4
401	2,2,3,3-Tetramethylpentane CAS 7154-79-2 C ₂ H ₅ C(CH ₃) ₂ C(CH ₃) ₃	C ₉ H ₂₀	i-Nonane Isononane	128.3 4.43 r 84 v	0.76	140 284 °F		25 77 °F	0.8 (43)		1 mg/m ³ = 0.19 ppm			430 IIA T2
402	Tetramethylsilane CAS 75-76-3 (CH ₃) ₄ Si	TMS C ₄ H ₁₂ Si	Tetramethyl silicane	88.2 3.04 r 85 v	0.65	26 79 °F	750	<-20 <-4 °F	1.0 (37)		1 mg/m ³ = 0.27 ppm			330 IIB T2
403	Thionyl chloride CAS 7719-09-7 SOCl ₂	Cl ₂ OS	Sulfurous oxychloride Sulfurous dichloride	119.0 4.11 r	1.64	76 169 °F	124	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
404	Tin tetrachloride CAS 7646-78-8 SnCl ₄	Cl ₄ Sn	Tin chloride Stannic chloride	260.5 8.99 r	2.23	114 237 °F	24	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
405	Titanium tetrachloride CAS 7550-45-0 TiCl ₄	Cl ₄ Ti	Titanic chloride	189.7 6.55 r	1.73	136 277 °F	13	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
406	Toluene CAS 108-88-3 C ₆ H ₅ CH ₃	C ₇ H ₈	Toluol Methyl benzene Methyl benzol Phenyl methane	92.1 3.18 r 66 v	0.87	111 232 °F	29	6 43 °F	1.0 (38)	1.0 (38)	1.1 (42)	1.1 (42)	1.1 (42)	535 IIA T1
407	Tributylamine CAS 102-82-9 (C ₄ H ₉) ₃ N	TBA C ₁₂ H ₂₇ N	N,N-Dibutyl-1-butanamine	185.4 6.40 r	0.78	214 417 °F	0.4	86 187 °F	1.4* (108)		1 mg/m ³ = 0.13 ppm			IIA
408	1,1,1-Trichloroethane CAS 71-55-6 CH ₃ CCl ₃	C ₂ H ₃ Cl ₃	Methyl chloroform R140a	133.4 4.60 r 590 v	1.34	74 165 °F	133	n. a.	9.5 (528)		7.5 (417)	7.5 (417)		490 IIA T1

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
395			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
396	50 (184)		IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and 8000 H2S LC	THT: 20 / 50 / 100 ppm / LDL = 1 ppm	
397			EC	Polytron 7000 and 8000 NH3 LC	TDMATI: 100 ppm / LDL = 5 ppm	
398			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
			EC	Polytron 7000 and 8000 OV1	as IPA (100 / 200 / 300 ppm)	S = 0.4 (L)
399			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	25 / 100 %LEL	
			IR	P 5700 type 340	50 + 100 %LEL	
400			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
401			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
402			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
403		1c (5.0)	EC	Polytron 7000 and 8000 AC	Acid: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
			EC	Polytron 7000 and 8000 HCl	SOC: 5 / 10 / 20 ppm / LDL = 0.2 ppm	
404			EC	Polytron 7000 and 8000 AC	Acid: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
			EC	Polytron 7000 and 8000 HCl	TTC: 5 / 10 / 20 ppm / LDL = 0.5 ppm	
405			EC	Polytron 7000 and 8000 AC	Acid: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
			EC	Polytron 7000 and 8000 HCl	TiTC: 5 / 10 / 20 ppm / LDL = 0.2 ppm	
406	50 (192)	200 (768)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	SE Ex / PEX 3000 / P 8200 performance approved
			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL // 2750 ppm Gas-Library	PIR 7000 / P 8700 performance approved
			IR	P 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	45 / 100 %LEL // 4400 ppm Gas-Library	PIR 7000 / P 8700 performance approved
			IR	P 5700 type 340	50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	PIR 3000 / P 8310 performance approved
407			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
408	200 (1112)	350 (1945)	IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (\$)	
			IR	P 5700 type 334	100 %LEL (\$)	

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
409	Trichloro ethene CAS 79-01-6 Cl ₂ C=CHCl	TCE C ₂ HCl ₃	Trichloro ethylene 1.1.2-Trichloroethylene Ethylene trichloride	131.4 4.54 r 444 v	1.46	87 189 °F	77.6		7.9 (433)		8.0 (438)			410 IIA T2
410	Trichloromethane CAS 67-66-3 CHCl ₃		Chloroform Methane trichloride R20	119.4 4.12 r	1.49	61 142 °F	209	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
411	Trichloronitromethane CAS 76-06-2 CCl ₃ NO ₂		Nitrochloroform Chloropicrin Nitrotrichloromethane	164.4 5.67 r	1.66	112 234 °F	22.5	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
412	1.2.3-Trichloropropane CAS 96-18-4 C ₃ H ₅ Cl ₃		Trichlorohydrin Allyl trichloride Glyceryl trichlorohydrin	147.4 5.09 r	1.39	156 313 °F	2.8	74 165 °F	3.2 (197)		3.2 (197)	3.2 (197)		IIA
413	Trichlorosilane CAS 10025-78-2 SiHCl ₃	TCS HCl ₃ Si	Silyl trichloride Silicchloroform Silicon chloroform	135.5 4.68 r 435 v	1.34	32 90 °F	660	<-20 <-4 °F	6.9 (390)			1.2 (68)		195 IIC T4
414	Triethoxymethane CAS 122-51-0 CH(OC ₂ H ₅) ₃	TEOF C ₇ H ₁₆ O ₃	Triethyl orthoformate Formic acid-o-triethyl ester	148.2 5.12 r 72 v	0.90	146 295 °F	4	30 86 °F	0.7 (43)					
415	Triethylamine CAS 121-44-8 (C ₂ H ₅) ₃ N	TEA C ₆ H ₁₅ N	N,N-Diethylethanamine	101.2 3.49 r 104 v	0.73	89 192 °F	70	-7 19 °F	1.2 (51)	1.2 (51)	1.2 (51)	1.2 (51)	1.2 (51)	215 IIA T3
416	1.1.1-Trifluoroethane CAS 420-46-2 CF ₃ CH ₃		Methylfluoroform R143a	84.0 2.90 r	Gas	-48 -54 °F	Gas	Gas		6.8 (238)			9.2 (322)	714 IIA T1
417	Trifluoro methane CAS 75-46-7 CHF ₃		Fluoroform R23	70.0 2.42 r	Gas	-82.2 -116 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
418	Trifluoro methoxy benzene CAS 456-55-3 C ₆ H ₅ OCF ₃	TFMB C ₇ H ₅ F ₃ O	Trifluoroanisene Phenyl trifluoromethyl ether	162.1 5.60 r	1.23	102 216 °F								
419	Trifluoromethyl benzene amine CAS 98-16-8 CF ₃ -C ₆ H ₄ -NH ₂		Trifluoromethylanilin 3-Aminobenzo trifluoride	161.1 5.56 r	1.30	187 369 °F	1	85 185 °F						IIA
420	Trimethoxymethane CAS 149-73-5 CH(OC ₂ H ₅) ₃	TMOF C ₄ H ₁₀ O ₃	Trimethyl orthoformate Formic acid-o-trimethyl ester	106.1 3.66 r	0.97	104 219 °F	31.3	13 55 °F	1.4* (62)					255 IIB T3
421	Trimethoxysilane CAS 2487-90-3 (CH ₃ O) ₃ SiH	TMOS C ₃ H ₁₀ O ₃ Si	Trimethoxy silylhydride	122.2 4.22 r	0.96	81 178 °F	9.6		1.0* (51)					

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
409	11 (60)	25 (137)	IR	PIR 7000 type 334, P 8700 type 334	65 / 100 %LEL	S = 1.5
			IR	P 5700 type 334	100 % LEL	
			PY	Pyrolyzer Polytron 7500 PFC	20 ppm / LDL = 0.5 ppm	
410	0.5 (2.5)	50c (249)	PY	Pyrolyzer Polytron 7500 PFC	TCM: 100 / 100 ppm / LDL = 1 ppm	
411	0.1 (0.69)	0.1 (0.69)	PY	Pyrolyzer Polytron 7500 PFC	20 ppm / LDL = 0.5 ppm	S = 1.3
412		10 (61)	IR	PIR 7000 type 334, P 8700 type 334	80 / 100 %LEL (&)	
			IR	P 5700 type 334	100 %LEL (&)	
			IR	PIR 7000 type 340, P 8700 type 340	60 / 100 %LEL	
			IR	P 5700 type 340	100 %LEL	
413			EC	Polytron 7000 and 8000 AC	Acid: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
			EC	Polytron 7000 and 8000 HCl	TrCS: 5 / 10 / 20 ppm / LDL = 0.5 ppm	
414			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
415	1 (4.2)	25 (105)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	P 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and 8000 NH3 LC	TEA: 100 ppm / LDL = 5 ppm	
416			IR	PIR 7000 type 334, P 8700 type 334	45 / 100 %LEL	S = 0.8
			IR	P 5700 type 334	50 + 100 %LEL	
			PY	Pyrolyzer Polytron 7500 PFC	40 ppm / LDL = 1 ppm	
417			PY	Pyrolyzer Polytron 7500 PFC	100 ppm / LDL = 2 ppm	S = 0.3
418			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (\$)	
			IR	P 5700 type 334	100 %LEL (\$)	
419			PY	Pyrolyzer Polytron 7500 PFC	60 ppm / LDL = 1 ppm	S = 0.5
420			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
421			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
422	Trimethyl-o-acetate CAS 1445-45-0 CH ₃ C(OCH ₃) ₃	TMOA C ₆ H ₁₂ O ₃	1.1.1-Trimethoxyethane Trimethoxyethane Acetic acid-o-trimethyl ester Trimethyl orthoacetate	120.2 4.15 r	0.96	108 226 °F	20		1.5** (75)		1 mg/m ³ = 0.20 ppm			
423	Trimethylamine CAS 75-50-3 (CH ₃) ₃ N	TMA C ₃ H ₉ N	N,N-Dimethylmethanamine	59.1 2.04 r	Gas	3 37 °F	Gas	Gas	2.0 (49)	2.0 (49)	2.0 (49)	2.0 (49)	2.0 (49)	190 IIA T4
424	1.2.4-Trimethylbenzene CAS 95-63-6 C ₆ H ₃ (CH ₃) ₃	C ₉ H ₁₂	Pseudocumene	120.2 4.15 r	0.88	169 336 °F	2.1	50 122 °F	0.8 (40)		0.9 (45)	0.9 (45)		485 IIA T1
425	1.3.5-Trimethylbenzene CAS 108-67-8 C ₆ H ₃ (CH ₃) ₃	C ₉ H ₁₂	Mesitylene	120.2 4.15 r	0.87	165 329 °F	2.7	44 111 °F	1.0 (50)	0.8 (40)			0.8 (40)	550 IIA T1
426	Trimethyl borane CAS 593-90-8 B(CH ₃) ₃	TMB C ₃ H ₉ B	Boron trimethyl	55.9 1.93 r	Gas	-20 -4 °F	Gas	Gas			1 mg/m ³ = 0.43 ppm			
427	2.2.4-Trimethyl hexane CAS 16747-26-5 C ₂ H ₅ CH(CH ₃)CH ₂ C(CH ₃) ₃	C ₉ H ₂₀	i-Nonane Isononane	128.3 4.43 r 79 v	0.71	126 259 °F	16	15 59 °F	0.7 (37)		1 mg/m ³ = 0.19 ppm			IIA
428	2.2.4-Trimethylpentane CAS 540-84-1 CH ₃ CH(CH ₃)CH ₂ C(CH ₃) ₃	C ₈ H ₁₈	i-Octane Isooctane	114.2 3.94 r 103 v	0.69	99 210 °F	53	-12 10 °F	1.0 (48)	0.7 (33)		1.1 (52)	1.0 (48)	410 IIA T2
429	2.4.4-Trimethyl-1-pentene CAS 107-39-1 CH ₂ =C(CH ₃)CH ₂ C(CH ₃) ₃	C ₈ H ₁₆	a-Diisobutylene Di-i-butylene	112.2 3.87 r 78 v	0.72	101 214 °F	46	-6 21 °F	0.8 (37)		1 mg/m ³ = 0.21 ppm		0.8 (37)	415 IIA T2
430	Trimethyl silane CAS 993-07-7 SiH(CH ₃) ₃	TMS C ₃ H ₁₀ Si	2-Methyl-2-silapropane	74.2 2.56 r	Gas	7 45 °F	Gas	Gas	1.3 (40)		1 mg/m ³ = 0.32 ppm			235 T3

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
422			IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL	
			IR	P 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
423		10 (25)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	P 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and 8000 NH3 LC	TMA: 100 ppm / LDL = 5 ppm	
424	20 (100)	25 (125)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
425	20 (100)	25 (125)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL // 2000 ppm Gas-Library	
			IR	P 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL // 1600 ppm Gas-Library	
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
426			EC	Polytron 7000 and 8000 Hydride		on request
427			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL	
			IR	P 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
428			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 1400 ppm Gas-Library	PIR 7000 / P 8700 performance approved
			IR	P 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 700 ppm Gas-Library	PIR 7000 / P 8700 performance approved
			IR	P 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
429			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	P 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and 8000 OV1	as EtOH (100 / 200 / 300 ppm)	S = 0.6 (L)
430		5 (15)	EC	Polytron 7000 and 8000 Hydride	TMS: 5 / 20 / 20 ppm / LDL = 0.3 ppm	
			EC	Polytron 7000 and 8000 Hydride SC	TMS: 1 / 5 / 20 ppm / LDL = 0.2 ppm	

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
431	Trimethylsilanol CAS 1066-40-6 (CH ₃) ₃ SiOH	TMS C ₃ H ₁₀ OSi	Hydroxytrimethylsilane Trimethylhydroxysilane	90.2 3.11 r	0.81	98 208 °F	16	16 61 °F	1.4 (53)		1 mg/m ³ = 0.27 ppm			380 T2
432	1,3,5-Trioxane CAS 110-88-3 (CH ₂) ₃ O ₃	C ₃ H ₆ O ₃	Trioxymethylene 1,3,5-Trioxacyclohexane Metaformaldehyde	90.1 3.11 r	1.17	115 239 °F	11	45 113 °F	3.6 (135)	3.2 (120)		3.6 (135)	3.2 (120)	410 IIB T2
433	Tri-n-propylamine CAS 102-69-2 (C ₃ H ₇) ₃ N	C ₉ H ₂₁ N	N,N-Dipropyl-1-propanamine Tripropyl amine	143.3 4.95 r	0.75	156 313 °F	3.5	35 95 °F	0.7 (42)			0.7 (42)		180 T4
434	Tungsten hexafluoride CAS 7783-82-6 WF ₆	F ₆ W		297.8 10.28 r	Gas	17 63 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
435	n-Undecane CAS 1120-21-4 C ₁₁ H ₂₄	C11 C ₁₁ H ₂₄	Hendecane	156.3 5.40 r	0.74	196 385 °F	0.5	61 142 °F	0.6 (39)		1 mg/m ³ = 0.15 ppm			195 IIA T4
436	Vinyl acetate CAS 108-05-4 CH ₃ COOCH=CH ₂	VAM C ₄ H ₆ O ₂	Vinyl ethanoate Acetic acid vinyl ester Acetic acid ethenyl ester Ethenyl acetate Ethenyl ethanoate 1-Acetoxyethylene	86.1 2.97 r 150 v	0.93	72 162 °F	120	-8 18 °F	2.6 (93)	2.6 (93)	2.6 (93)	2.6 (93)	2.6 (93)	385 IIA T2
437	Vinylacetylene CAS 689-97-4 CH ₂ =CHCCH	C ₄ H ₄	Butenyne Butenine 1-Buten-3-yne 3-Butenyne-1	52.1 1.80 r	Gas	5 41 °F	Gas	Gas	2.0 (43)			2.1 (46)		1 mg/m ³ = 0.46 ppm
438	Vinyl chloride CAS 75-01-4 CH ₂ =CHCl	VCM C ₂ H ₃ Cl	Chloroethene Chloroethylene R1140	62.5 2.16 r	Gas	-13 9 °F	Gas	Gas	3.8 (99)	3.6 (94)	3.6 (94)	3.6 (94)	3.6 (94)	415 IIA T2
439	Vinylcyclohexane CAS 695-12-5 C ₆ H ₁₁ CH=CH ₂	C ₆ H ₁₄	Ethenylcyclohexane Cyclohexylethylene Cyclohexylethene	110.2 3.80 r	0.81	128 262 °F			0.9** (41)					1 mg/m ³ = 0.22 ppm
440	4-Vinylcyclohexene CAS 100-40-3 C ₆ H ₉ CH=CH ₂	VCH C ₆ H ₁₂	1,2,5,6-Tetrahydrostyrene 4-Ethenyl-1-cyclohexene Cyclohexenylethylene	108.2 3.73 r 49 v	0.83	128 262 °F	14	15 59 °F	0.6 (27)	0.8 (36)		1.0 (45)	0.8 (36)	265 IIA T3
441	Vinyl fluoride CAS 75-02-5 CH ₂ =CHF	VF C ₂ H ₃ F	Fluoroethene Fluoroethylene R1141	46.0 1.59 r	Gas	-72 -98 °F	Gas	Gas	2.9 (56)			2.6 (50)		375 T2
442	Vinylmethyl ether CAS 107-25-5 CH ₂ =CHOCH ₃	VME C ₃ H ₆ O	Methoxyethene Ethenyl methylether Methylvinyl ether	58.1 2.01 r	Gas	6 43 °F	Gas	Gas	2.2 (53)			2.6 (63)		220 IIB T3
443	Vinylmethylketone CAS 78-94-4 CH ₃ COCH=CH ₂	MVK C ₄ H ₆ O	Methylvinylketone 1-Buten-3-one Methylene acetone	70.1 2.42 r	0.83	81 178 °F	100	-7 19 °F				2.1 (61)		1 mg/m ³ = 0.34 ppm

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
431			IR	PIR 7000 type 334, P 8700 type 334	40 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	25 / 100 %LEL	
			IR	P 5700 type 340	50 + 100 %LEL	
432			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	solid - melting point 62 °C
433			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
434			EC	Polytron 7000 and 8000 AC	WF6: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
435			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
436	5 (18)	4c (14)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	polymerizing/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	60 / 100 %LEL	
			IR	P 5700 type 334	100 %LEL	
			EC	Polytron 7000 and 8000 OV1	VAc: 20 / 50 / 100 ppm / LDL = 5 ppm	S = 0.8
437			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL (?)	polymerizing/sensor poison
438	3 (7.8)	1 (2.6)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	corrosive/sensor poison
			EC	Polytron 7000 and 8000 OV1	VC: 20 / 50 / 100 ppm / LDL = 5 ppm	S = 0.8
439			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
440			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	P 5700 type 340	100 %LEL (?)	
			EC	Polytron 7000 and 8000 OV1	as EtOH (100 / 200 / 300 ppm)	S = 0.5 (L)
441		1 (1.9)	EC	Polytron 7000 and 8000 OV1	as VC (20 / 50 / 100 ppm)	
442	50 (121)		IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
443			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	

List of detectable gases and vapours 2015

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
444	2-Vinylpyridine CAS 100-69-6 C ₆ H ₄ N(CH=CH ₂)	2VP C ₇ H ₇ N	2-Ethenylpyridine 2-Pyridylethylene 2-Pyridylethene	105.1 3.63 r	0.97	159 318 °F	2.5	35 95 °F		1.2 (53)			1.2 (53)	482 IIA T1
											1 mg/m ³ = 0.23 ppm			
445	Vinyltrimethoxysilane CAS 2768-02-7 CH ₂ =CHSi(OCH ₃) ₃	VTMOS C ₆ H ₁₂ O ₃ Si	Ethenyltrimethoxysilane Trimethoxy vinylsilane Trimethoxy silylethene	148.2 5.12 r 67 v	0.97	124 255 °F		23 73 °F	0.7 (43)					235 IIB T3
											1 mg/m ³ = 0.16 ppm			
446	m-Xylene CAS 108-38-3 C ₆ H ₄ (CH ₃) ₂	C ₈ H ₁₀	1,3-Dimethylbenzene m-Xylol	106.2 3.67 r 77 v	0.86	139 282 °F	8.3	25 77 °F	1.0 (44)	1.0 (44)	1.1 (49)	1.1 (49)		540 IIA T1
											1 mg/m ³ = 0.23 ppm			
447	o-Xylene CAS 95-47-6 C ₆ H ₄ (CH ₃) ₂	C ₈ H ₁₀	1,2-Dimethylbenzene o-Xylol	106.2 3.67 r 75 v	0.88	144 291 °F	6.7	30 86 °F	1.0 (44)	1.0 (44)	0.9 (40)	0.9 (40)	1.0 (44)	465 IIA T1
											1 mg/m ³ = 0.23 ppm			
448	p-Xylene CAS 106-42-3 C ₆ H ₄ (CH ₃) ₂	C ₈ H ₁₀	1,4-Dimethylbenzene p-Xylol	106.2 3.67 r 77 v	0.86	138 280 °F	8.9	25 77 °F	1.0 (44)	0.9 (40)	1.1 (49)	1.1 (49)		540 IIA T1
											1 mg/m ³ = 0.23 ppm			

No.	TLV Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
444			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
445			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	P 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	P 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
446	100 (443)	100 (443)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	30 / 100 %LEL	
			IR	P 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
447	100 (443)	100 (443)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	SE Ex / PEX 3000 / P 8200 performance approved
			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL // 2500 ppm Gas-Library	PIR 7000 / P 8700 performance approved
			IR	P 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	30 / 100 %LEL // 2500 ppm Gas-Library	PIR 7000 / P 8700 performance approved
			IR	P 5700 type 340	50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
448	100 (443)	100 (443)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	P 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	30 / 100 %LEL	
			IR	P 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	

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