Dräger

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Dräger Gas List 2018

List of detectable gases and vapours

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List of detectable gases and vapours

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

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Dräger Safety AG & Co. KGaA
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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 number.

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-tert-butylether 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 second line shows the CAS no., and the third line shows the chemical formula.

Column 3: Shortn., S-formula
If there is a technical abbreviation known it is listed in this column second line. The sum formula is printed in the third line.

Column 4: Further synonyms
If further substance 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/m^3 or mg/m^3.

Using the mol weight M you can also calculate the density of a gas in kg/m^3 (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, ρ = 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 (based on the LEL PTB in column 10) 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 n-Hexane vapour.

Column 6: Dens. g/ml
In this column the density ρ of the liquid in g/ml (= g/cm^3) 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: p_{20} mbar
Vapour pressure p_{20} of a liquid at 20 °C given in mbar (= hPa). Vapour pressure is only defined for liquids. So for gases 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

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(for these flammable liquids the flash-point 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

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

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, preferrably based on the source PTB. Flammable gases do not have a flashpoint and are marked by "Gas". Gases or liquids being non-flammable are marked by "n. a.".

The emperically 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

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

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

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

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.". A void cell in this column indicates that the LEL is unknown. Five values of 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 and amendments.

If there is no LEL available from these five sources, LELs coming from other sources (e.g. the GESTIS database of hazardous substances) have been used, indicated by a *.
Also LELs obtained by halving the stoichiometric concentration of optimum combustion as an approximate estimation are marked by **.

Conversion (valid at 20 °C):
By means of the mol weight (column 5) you can convert the LEL to g/m^3 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

$$LEL_{g/m3} = \frac{128.3}{2.4} \cdot 0.7 = 37.4$$

The LEL of n-Nonane is 37.4 g/m^3.

And vice versa:

$$LEL = \frac{2.4}{M} \cdot LEL_{g/m3}$$

Below the values of the LEL given in %v/v the corresponding values given in g/m^3 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 the IEC (EN) 60079-0 standard), is listed in the second line. If the ignition temperature is known, the third 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: WEL Germ. and TLV USA
If available this column lists toxic limits as workplace exposure limit (WEL) or threshold limit values (TLV) in ppm.

WEL Germ.: Source: German legally binding TRGS 900, last update June 2017.

TLV USA: Source: OSHA.
If no OSHA values 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. A WEL value followed by “T” indicates the tolerance concentration of carcinogenic substances according to the German legally binding TRGS 910.

If neither the German WEL nor the US TLV is listed this does not necessarily mean that the considered substance is not toxic! Short-term limit values are not included in this gas list.

Conversion (valid at 20 °C):
By means of the mol weight (column 5) you can convert the WEL or TLV to mg/m^3 by multiplying the given value in ppm with the mol weight M and dividing it by 24.

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

$$TLV_{mg/m3} = \frac{128.3}{24} \cdot 200 = 1069$$

The TLV is 1069 mg/m^3.

Vice versa:

$$TLV = \frac{24}{M} \cdot TLV_{mg/m3}$$

Below the limit values given in ppm the corresponding values given in mg/m^3 are listed. They are enclosed in parenthesis. As these figures are exactly calculated they may slightly be different from the 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

OP - infra-red absorption, open path measuring system

Column 20: Detectable with
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

Remark: For transmitters of the series 5000 and 8000 the product name “Polytron” is mostly replaced by a “P”.

PEX 3000, SE Ex, P 5200 and P 8200
For catalytic bead sensors and transmitters the full scale deflection value (f.s.d.) is always 100 %LEL. If starting with “10 //” also 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”. Separated by a “//” also the lowest f.s.d. value in ppm is listed for these substances.

In any case the minimum and maximum f.s.d. values in %LEL are listed.

The information given for PIR 7000 is also valid for the transmitter P 8700 of the same type (334 or 340).

Dräger P 5700 type 334 and 340
To indicate that with this IR-transmitter only the given full scale deflection values are configurable, these are separated by a “+”. So, “20 + 50 + 100 %LEL” means that only these three full scale deflection values can be configured.

Dräger PIR 3000, P5310, P8310
The full scale deflection value of these IR-transmitters is always 100 %LEL. Other measuring ranges are not suitable.

A “(!)” indicates that for the P 5310 and P 8310 or the DrägerSensor IR (DSIR) a special calibration procedure has to be performed.

For all IR-transmitters:

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.

Pulsar
The expression “Polytron Pulsar 2” covers all the variants Polytron Pulsar, Polytron Pulsar 2 and Polytron Pulsar duct mount as well as Pulsar 7000 series. 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 8100
Separated by a “/” the minimum, standard, and maximum full scale deflection values are listed.

For substances with a measuring parameter data set in the sensor’s EPROM an LDL (Lower Detection Limit) is listed. For further information refer to the sensor data sheet.

For substances available in the sensor's EPROM the full scale deflection values have to be multiplied by the given cross sensitivity factor.

Example: Morpholine with Polytron 7000 and sensor NH_3: “50 / 100 ppm x 4” means that the configured f.s.d. of 50 or 100 ppm NH_3 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, H_2S, and NH_3, 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.

Remark: The given cross sensitivity factor may fluctuate considerably and should be individually determined by means of the target gas.

Polytron 5100
Only the full scale deflection values separated by a “+” can be configured.

DL-34903-2015

Polytron 3000 and Polytron 2000
The possible full scale deflection values are separated by an “or” to indicate that these are different products.

Column 22: Important remarks
Here you will find remarks e. g. concerning potential poisoning of catalytic bead sensors by corrosive or polymerizing substances and cross sensitivity factors S of electrochemical sensors resp. CSFs of the Pulsar.

Measuring performance approval
If the considered substance is listed in the measuring performance certificate (mostly in respect to the “measuring function for explosion protection” acc. to EN 60079-29-1) this is indicated by “performance approved”. This remark is valid for all the listed products.

For the results of the performance tests including the deviated application hints please refer to the relevant performance approval report and the instructions for use.

Cross sensitivity factors
For electrochemical sensors the given relative sensitivities S are only valid for new sensors and a value fluctuation of about < ± 30 %. A “*” indicates a lower exemplary fluctuation of ≤ ± 10 %.

An “(L)” indicates that the sensor to be used for the substance in consideration is recommended for gas leak detection.

Example: OV1-sensor for Butylene oxide: “S = 0.4 (L)” means the sensitivity of the OV1-sensor exposed to Butylene oxide is ca. 40 % compared to Ethylene oxide.

This sensor should only be used to detect gas leaks of Butylene oxide. Since the cross sensitivity may fluctuate considerably from sensor to sensor it is recommended to test the sensor by means of a suitable concentration of the target gas.

Gas leak detection
A gas leak is an unpredictable abnormal release of gases or vapours of higher concentrations.

A gas leak has to be regarded as an exceptional event. 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 gas leak detection means to give a warning when a reasonable alarm threshold is exceeded rather than to measure the current gas concentration exactly. This can be realized by the use of cross sensitivity factors as long as a proof test with a suitable concentration of the target gas triggers a preset alarm threshold under the current environmental conditions.

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.

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C2H3ClO	7
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C2H5Br	199
C2H5Cl	201
C2H5ClO	98
C2H5ClO	97
C2H5N	209
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C2H6O	163
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C2H7NO	190
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C3H4O2	10
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C3H5Cl	16
C3H5Cl	99
C3H5ClO	186
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C3H7NO	165
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C3H10Si	425
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C4H6O	183
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C4H6O	50
C4H6O	438
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C4H6O2	431
C4H6O2	263
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C4H7Cl	275
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C4H8	103
C4H8	52
C4H8	51
C4H8O	54
C4H8O	84
C4H8O	223
C4H8O	390
C4H8O	292
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C4H8O2	306
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C4H8O2	374
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C4H8S	393
C4H9Cl	75
C4H9Cl	74
C4H9Cl	73
C4H9NO	320
C4H9NO	154
C4H10	44
C4H10	45
C4H10O	48
C4H10O	49
C4H10O	146
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C4H10S	148
C4H10S	80
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C4H11N	68
C4H11N	69
C4H11N	66
C4H11N	67
C4H11N	140
C4H11N	164
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C4H11NO	19
C4H12O3Si	319
C4H12O4Si	399
C4H12Si	401
C4H14OSi2	396
C5H4O2	229
C5H5N	379
C5H6O2	230
C5H7N	312
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C5H10O2	363
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C5H12O2	266
C5H12O3	417
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C5H13N	171
C5H13N	172
C5H13NO	170
C5H14N2	157
C5H14O2Si	139
C6H4Cl2	125
C6H5Cl	92
C6H5F	225
C6H6	36
C6H7F3O2	194
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C6H7N	311
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C6H10O	262
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C6H10O2	17
C6H10O3	359
C6H12	203
C6H12	247
C6H12	246
C6H12	104
C6H12	288
C6H12O	283
C6H12O	105
C6H12O	244
C6H12O	245
C6H12O2	61
C6H12O2	60
C6H12O2	59
C6H12O2	119
C6H12O2	30
C6H12O2	62
C6H12O3	192
C6H12O3	337
C6H12O3	272
C6H13N	109
C6H14	159
C6H14	304
C6H14	242
C6H14	158
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C6H14O	305
C6H14O	243
C6H14O	179
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C6H14O	180
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C6H14O2	56

Sum formula	No.
C6H14O3	144
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C6H15N	176
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C6H15N	248
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C6H16N2	398
C6H18OSi2	241
C6H18O3Si3	239
C6H19NSi2	240
C7H5F3O	414
C7H7Cl	101
C7H7N	439
C7H8	329
C7H8	405
C7H8O	33
C7H10O	389
C7H10O2	18
C7H12O2	63
C7H12O2	64
C7H12O2	267
C7H12O2	65
C7H14	238
C7H14	287
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C7H14O	277
C7H14O	237
C7H14O2	22
C7H14O2	55
C7H14O2	21
C7H15N	220

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C7H16	296
C7H16	235
C7H16	168
C7H16	297
C7H16O	236
C7H16O	29
C7H16O2	58
C7H16O3	411
C7H16O3	271
C7H22O2Si3	234
C8H8	383
C8H8O	5
C8H10	198
C8H10	442
C8H10	441
C8H10	443
C8H12	435
C8H14	434
C8H14	330
C8H14O2	81
C8H16	424
C8H16	204
C8H16	334
C8H16O	212
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C8H16O2	72
C8H16O3	57
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C8H18	166
C8H18	333

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C8H18O	123
C8H18O2	124
C8H18O3	143
C8H18O3	178
C8H19N	215
C8H19N	122
C8H19NSi2	397
C8H20O4Si	386
C8H20Pb	260
C8H22N2Si	70
C8H24N4Ti	394
C8H24O2Si3	332
C8H24O4Si4	331
C9H10	317
C9H10	315
C9H10	316
C9H12	216
C9H12	102
C9H12	420
C9H12	419
C9H12	367
C9H18	370
C9H18O	328
C9H20	422
C9H20	291
C9H20	327
C9H20	400
C9H21N	428
C10H8	321
C10H10	182
C10H12	137

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C10H12	391
C10H14	141
C10H14	395
C10H16	261
C10H16	350
C10H18	114
C10H18O	385
C10H20	76
C10H20	117
C10H22	116
C10H22O	120
C10H30O5Si5	115
C11H20O2	214
C11H24	430
C12H22	136
C12H26	341
C12H26	185
C12H27N	406
C12H36O6Si6	184
ClF3	90
ClO2	89
Cl2	88
Cl2OS	402
Cl3OP	348
Cl3P	349
Cl4Ge	232
Cl4Si	381
Cl4Sn	403
Cl4Ti	404
Cl5Sb	34
D2	118

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F2	224
F4Ge	233
F4Si	382
F6W	429
HBr	251
HCl	252
HClO3S	100
HCl3Si	410
HF	254
HI	255
HNO3	322
H2	250
H2Cl2Si	135
H2O2	256
H2S	258
H2Se	257
H3As	35
H3N	20
H3P	347
H4Ge	231
H4N2	249
H4Si	380
H6B2	121
H6Si2	181
NO	325
NO2	324
O2	335
O2S	384
O3	336

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 8100
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 2 wire 4-20-mA-transmitter for toxic gases and vapours with display, optional relays 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-85378-2013

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-14983-2010

Dräger Polytron 5700
Explosion-proof transmitter for flammable gases and vapours with display, optional relays 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 transmitter for flammable gases and vapours with display, optional relays and DrägerSensor IR.

D-32406-2011

GS01
Intrinsically safe true wireless transmitter for the detection of flammable gases and vapours.

D-42775-2015

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 transmitter for carbon dioxide with display, optional relays and Dräger PIR 7200.

D-39564-2011

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 DQ or LC M, with internal display and control elements.

D-11160-2011

Dräger Polytron SE Ex PR M1 DQ
Sensing head with DrägerSensor Ex PR M DQ and measuring range 0 to 100 %LEL.

D-13692-2010

Dräger Polytron SE Ex LC M1 DD
Sensing head with DrägerSensor Ex LC M for flammable gases with concentrations lower than 10 %LEL.

D-13696-2010

Dräger Polytron SE Ex HT M DQ
Sensing head with DrägerSensor Ex HT M DQ and metal enclosure for ambient temperatures up to 150 °C.

D-13699-2010

Dräger Polytron 8200
Explosion-proof transmitter with DrägerSensor Ex PR NPT DQ 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 transmitter for flammable gases with display, optional relys and DrägerSensor Ex PR NPT DQ 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 DQ
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 VAPOURS

Dräger Polytron Pulsar
Open path system for the detection of gas clouds along a line-of-sight of 4 to 200 meters between receiver and transmitter. Robust due to the stainless steel housing.

ST-981-2001

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

D-85823-2013

Dräger Polytron Pulsar Duct Mount
Cross duct system for the detection of gas clouds in a duct with a diameter of 1 to 8 meters.

ST-3158-2003

Dräger Pulsar 7000 Series
Open path system for the detection of gas clouds along a line-of-sight of 4 to 200 meters between receiver and transmitter. Robust due to the stainless steel housing.

D-7359-2016

List of detectable gases and vapours 2018

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		Ethyl aldehyde	44.1	0.78	21	1006	<-20	4.0	4.0	4.0	4.0	4.0	155
	CAS 75-07-0	Aald	Ethanal	1.52 r		70 °F		<-4 °F	(74)	(74)	(74)	(74)	(74)	IIA
	CH_3CHO	C_2H_4O	Acetic aldehyde	141 v		1 ppm = 1.84 mg/m³					1 mg/m³ = 0.54 ppm			T4
2	Acetic acid		Ethanoic acid	60.1	1.05	118	16	39	6.0	4.0	4.0	4.0	4.0	485
	CAS 64-19-7		Methanecarboxylic acid	2.07 r		244 °F		102 °F	(150)	(100)	(100)	(100)	(100)	IIA
	CH_3COOH	$C_2H_4O_2$	Ethylic acid			1 ppm = 2.50 mg/m³					1 mg/m³ = 0.40 ppm			T1
3	Acetone		Dimethyl ketone	58.1	0.79	56	246	<-20	2.5	2.5	2.5	2.5	2.5	535
	CAS 67-64-1	DMK	Propan-2-one	2.01 r		133 °F		<-4 °F	(61)	(61)	(61)	(61)	(61)	IIA
	CH_3COCH_3	C_3H_6O	2-Propanone	115 v		1 ppm = 2.42 mg/m³					1 mg/m³ = 0.41 ppm			T1
			Ketopropane											
4	Acetonitrile		Methyl cyanide	41.1	0.78	82	94	2	3.0	3.0	3.0	3.0	3.0	525
	CAS 75-05-8	AN	Ethyl nitrile	1.42 r		180 °F		36 °F	(51)	(51)	(51)	(51)	(51)	IIA
	CH_3CN	C_2H_3N	Cyanomethane	99 v		1 ppm = 1.71 mg/m³					1 mg/m³ = 0.58 ppm			T1
			Methanecarbonitrile											
5	Acetophenone		Acetyl benzene	120.2	1.03	202	0.4	77	1.1			1.1		535
	CAS 98-86-2		Methylphenylketone	4.15 r		396 °F		171 °F	(55)			(55)		IIA
	$C_6H_5COCH_3$	C_8H_8O	1-Phenylethanone			1 ppm = 5.01 mg/m³					1 mg/m³ = 0.20 ppm			T1
			Phenylmethylketone											
6	Acetyl acetone		2.4-Pentandione	100.1	0.98	140	9	34	1.7	1.7			1.7	340
	CAS 123-54-6		Pentane-2.4-dione	3.46 r		284 °F		93 °F	(71)	(71)			(71)	IIA
	$CH_3COCH_2COCH_3$	$C_5H_8O_2$	Diacetylmethane			1 ppm = 4.17 mg/m³					1 mg/m³ = 0.24 ppm			T2
			Aetyl-2-propanone											
7	Acetylchloride		Acetic acid chloride	78.5	1.10	51	309	-4	7.3	5.0		5.0	5.0	390
	CAS 75-36-5		Ethanoyl chloride	2.71 r		124 °F		25 °F	(239)	(164)		(164)	(164)	IIA
	CH_3COCl	C_2H_3ClO		325 v		1 ppm = 3.27 mg/m³					1 mg/m³ = 0.31 ppm			T2
8	Acetylene		Ethine	26.0	Gas	-84	Gas	Gas	2.3	2.3	2.5	2.5	2.3	305
	CAS 74-86-2		Ethyne	0.90 r		-119 °F			(25)	(25)	(27)	(27)	(25)	IIC
	C_2H_2	C_2H_2				1 ppm = 1.08 mg/m³					1 mg/m³ = 0.92 ppm			T2
9	Acrolein		Acrylic aldehyde	56.1	0.84	52	295	<-20	2.8	2.8	2.8	2.8	2.85	215
	CAS 107-02-8		2-Propenal	1.94 r		126 °F		<-4 °F	(65)	(65)	(65)	(65)	(67)	IIB
	$CH_2=CHCHO$	C_3H_4O	Allyl aldehyde	117 v		1 ppm = 2.34 mg/m³					1 mg/m³ = 0.43 ppm			T3
10	Acrylic acid		Propenoic acid	72.1	1.05	141	4.3	55	2.4	2.4	2.4	2.4	2.9	395
	CAS 79-10-7		Acroleic acid	2.49 r		286 °F		131 °F	(72)	(72)	(72)	(72)	(87)	IIB
	$CH_2=CHCOOH$	$C_3H_4O_2$	Ethylenecarboxylic acid			1 ppm = 3.00 mg/m³					1 mg/m³ = 0.33 ppm			T2
11	Acrylonitrile		Vinyl cyanide	53.1	0.80	77	117	-5	2.8	2.8	3.0	3.0	2.8	480
	CAS 107-13-1	ACN	Ethylene cyanide	1.83 r		171 °F		23 °F	(62)	(62)	(66)	(66)	(62)	IIB
	$CH_2=CHCN$	C_3H_3N	2-Propenenitrile	116 v		1 ppm = 2.21 mg/m³					1 mg/m³ = 0.45 ppm			T1
			Cyanoethylene											
12	Allyl acetate		Acetic acid allyl ester	100.1	0.93	103	27	11	1.7	1.7			1.7	375
	CAS 591-87-7		Propenyl acetate	3.46 r		217 °F		52 °F	(71)	(71)			(71)	IIA
	$CH_3COOCH_2CH=CH_2$	$C_5H_8O_2$	2-Propenyl methanoate	114 v		1 ppm = 4.17 mg/m³					1 mg/m³ = 0.24 ppm			T2
13	Allyl alcohol		2-Propen-1-ol	58.1	0.85	97	24	21	2.5	2.5	2.5	2.5	2.5	375
	CAS 107-18-6	AA	Vinyl carbinol	2.01 r		207 °F		70 °F	(61)	(61)	(61)	(61)	(61)	IIB
	$CH_2=CHCH_2OH$	C_3H_6O	Propenyl alcohol	107 v		1 ppm = 2.42 mg/m³					1 mg/m³ = 0.41 ppm			T2
			3-Hydroxypropene											

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
1	50	200	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
	(92)	(368)	IR	PIR 7000 type 334, P 8700 type 334	40 / 100 %LEL // 16000 ppm Gas-Library	
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL // 8000 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 OV1	Aald: 50 / 100 / 200 ppm / LDL = 10 ppm	S = 0.3
2	10	10	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	P 8200 perf. approved with sensor ... DD
	(25)	(25)	EC	Polytron 7000 and P 8100 AC	Acid: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
3	500	1000	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD
	(1210)	(2421)	IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL // 7500 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	35 / 100 %LEL // 8750 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL	performance approved
			OP	Polytron Pulsar 2	1 // 4 / 8 LELm	CSF = 0.58 (Propane = 1.00) / LEL = 2.5
4	20	40	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
	(34)	(69)				
5			IR	PIR 7000 type 334, P 8700 type 334	60 / 100 %LEL (&)	
			IR	Polytron 5700 type 334	100 %LEL (&)	
6	30		CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
	(125)		IR	PIR 7000 type 334, P 8700 type 334	100 %LEL ($)	
			IR	Polytron 5700 type 334	100 %LEL ($)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
7			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
8		2500c	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD
		(2708)	EC	Polytron 7000 and P 8100 OV1	C2H2: 20 / 50 / 100 ppm / LDL = 5 ppm	S = 1.1
9	0.09	0.1	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	polymerizing/sensor poison
	(0.21)	(0.23)	IR	PIR 7000 type 334, P 8700 type 334	70 / 100 %LEL (&)	
			IR	Polytron 5700 type 334	100 %LEL (&)	
			IR	PIR 7000 type 340, P 8700 type 340	75 / 100 %LEL (&)	
			IR	Polytron 5700 type 340	100 %LEL (&)	
			EC	Polytron 7000 and P 8100 OV1	as MeOH (20 / 50 / 200 ppm)	S = 1.3 (L)
10	10	2	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	polymerizing/sensor poison
	(30)	(6.0)	EC	Polytron 7000 and P 8100 OV1	as EO x 10 (20 / 50 / 200 ppm x 10)	S = 0.1 (L)
11	1.2T	2	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	polymerizing/sensor poison
	(2.7)	(4.4)	EC	Polytron 7000 and P 8100 OV2	ACN: 20 / 50 / 100 ppm / LDL = 5 ppm	S = 0.2
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	Polytron 5700 type 340	100 %LEL (?)	
			EC	Polytron 7000 and P 8100 OV1	as EO (20 / 50 / 200 ppm)	S = 1.0 (L)
13	2	2	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
	(4.8)	(4.8)	IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 OV1	as EO (20 / 50 / 200 ppm)	S = 1.0 (L)

List of detectable gases and vapours 2018

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
14	Allylamine		3-Aminoprop-1-ene	57.1	0.76	53	262	<-20	2.2			2.2		370
	CAS 107-11-9		2-Propene-1-amine	1.97 r		127 °F		<-4 °F	(52)			(52)		
	CH_2=$CHCH_2NH_2$	C_3H_7N	1-Amino propylene	103 v	1 ppm = 2.38 mg/m³					1 mg/m³ = 0.42 ppm				T2
			2-Propenylamine											
15	Allyl bromide		3-Bromopropene	121.0	1.40	70	150	-1	4.3			4.4		295
	CAS 106-95-6		Bromoallylene	4.18 r		158 °F		30 °F	(217)			(222)		IIA
	CH_2=$CHCH_2Br$	C_3H_5Br	Propylene bromide	232 v	1 ppm = 5.04 mg/m³					1 mg/m³ = 0.20 ppm				T3
16	Allyl chloride		3-Chloro-1-propene	76.5	0.94	45	398	<-20	3.2	2.9	2.9	2.9	2.9	390
	CAS 107-05-1		3-Chloropropylene	2.64 r		113 °F		<-4 °F	(102)	(92)	(92)	(92)	(92)	IIA
	CH_2=$CHCH_2Cl$	C_3H_5Cl	Propylenechloride	162 v	1 ppm = 3.19 mg/m³					1 mg/m³ = 0.31 ppm				T2
			Chloroallylene											
17	Allylglycidylether		Allyl-2.3-epoxypropylether	114.1	0.97	154	2.6	45	1.3**					249
	CAS 106-92-3	AGE	1.2-Epoxy-3-allyloxypropane	3.94 r		309 °F		113 °F	(62)					IIB
	CH_2=$CHCH_2OC_3H_5O$	$C_6H_{10}O_2$	1-Allyloxy-2.3-epoxypropane		1 ppm = 4.75 mg/m³					1 mg/m³ = 0.21 ppm				T3
			Glycidyl allyl ether											
18	Allyl methacrylate		Allyl-2-methyl acrylate	126.2	0.93	140	8	33	1.2					
	CAS 96-05-9	AMA	Methacrylic acid allyl ester	4.36 r		284 °F		91 °F	(63)					
	CH_2=$C(CH_3)COOCH_2CH$=CH_2	$C_7H_{10}O_2$	2-Methyl-2-propenyl-2-propenoate		1 ppm = 5.26 mg/m³					1 mg/m³ = 0.19 ppm				
			2-Propenoic acid-2-methyl-2-propenyl ester											
			2-Methyl-2-propionic acid-2-propenyl ester											
19	2-Aminobutanol		2-Amino-1-butanol	89.1	0.94	173	0.2		1.6**					
	CAS 96-20-8		2-Aminobutan-1-ol	3.08 r		343 °F			(59)					
	$C_2H_5CH(NH_2)CH_2OH$	$C_4H_{11}NO$	1-Hydroxy-2-aminobutane		1 ppm = 3.71 mg/m³					1 mg/m³ = 0.27 ppm				
			1-Hydroxy-2-butylamine											
20	Ammonia		Anhydrous ammonia	17.0	Gas	-33.4	Gas	Gas	15.4	15.0	15.0	15.0	15.0	630
	CAS 7664-41-7		R717	0.59 r		-28 °F			(109)	(106)	(106)	(106)	(106)	IIA
	NH_3	H_3N			1 ppm = 0.71 mg/m³					1 mg/m³ = 1.41 ppm				T1
21	i-Amyl acetate		Isoamyl acetate	130.2	0.87	142	5.3	25	1.0		1.0	1.0		380
	CAS 123-92-2		Acetic acid i-amylester	4.49 r		288 °F		77 °F	(54)		(54)	(54)		IIA
	$CH_3COOC_5H_{11}$	$C_7H_{14}O_2$	i-Pentyl acetate	93 v	1 ppm = 5.43 mg/m³					1 mg/m³ = 0.18 ppm				T2
			Isopentyl acetate											
			3-Methyl butyl acetate											
22	n-Amyl acetate		n-Pentyl acetate	130.2	0.88	149	5.3	41	1.0	1.0	1.1	1.1	1.0	350
	CAS 628-63-7		Acetic acid n-amyl ester	4.49 r		300 °F		106 °F	(54)	(54)	(60)	(60)	(54)	IIA
	$CH_3COOC_5H_{11}$	$C_7H_{14}O_2$	Acetic acid pentyl ester		1 ppm = 5.43 mg/m³					1 mg/m³ = 0.18 ppm				T2
			Amyl acetic ester											
23	i-Amyl alcohol		3-Methylbutan-1-ol	88.2	0.81	131	2.7	42	1.2	1.3	1.2	1.2	1.3	340
	CAS 123-51-3		i-Pentanol	3.04 r		268 °F		108 °F	(44)	(48)	(44)	(44)	(48)	IIA
	$(CH_3)_2CH(CH_2)_2OH$	$C_5H_{12}O$	i-Butyl carbinol		1 ppm = 3.68 mg/m³					1 mg/m³ = 0.27 ppm				T2
			Isoamyl alcohol											
			Isopentanol											
			Isobutyl carbinol											
			Isopentyl alcohol											

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
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 ($)	
			IR	Polytron 5700 type 334	100 %LEL ($)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
			EC	Polytron 7000 and P 8100 NH3 LC	as NH3 x 2 (50 / 100 ppm x 2)	S = 0.45 (L)
			EC	Polytron 7000 and P 8100 OV1	as C3H6 (30 / 50 / 100 ppm)	S = 0.7 (L)
15			EC	Polytron 7000 and P 8100 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	performance approved
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	45 / 100 %LEL // 12800 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
			EC	Polytron 7000 and P 8100 OV1	as Aald x 2 (50 / 100 / 200 ppm x 2)	S = 0.15 (L)
17		5 (24)	EC	Polytron 7000 and P 8100 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	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	35 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
19			IR	PIR 7000 type 334, P 8700 type 334	60 / 100 %LEL (&)	
			IR	Polytron 5700 type 334	100 %LEL (&)	
			IR	PIR 7000 type 340, P 8700 type 340	30 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
20	20 (14)	50 (35)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD
			EC	Polytron 7000 and P 8100 NH3 HC	300 / 1000 / 1000 ppm / LDL = 30 ppm	
			EC	Polytron 7000 and P 8100 NH3 LC	NH3: 50 / 100 / 300 ppm / LDL = 5 ppm	S = 1.0
			EC	Polytron 7000 and P 8100 NH3 TL	NH3: 50 / 100 / 300 ppm / LDL = 1 ppm	S = 1.0
			EC	Polytron 8100 NH3 FL	NH3: 50 / 100 / 300 ppm / LDL = 1 ppm	S = 1.0 / Polytron 8100 only
			EC	Polytron 5100 NH3 HC	300 + 500 + 1000 ppm	
			EC	Polytron 5100 NH3 LC	50 + 100 + 200 + 300 ppm	
			EC	Polytron 5100 NH3 TL	50 + 100 + 200 + 300 ppm	
			EC	Polytron 3000 NH3 HC	300 or 1000 ppm	
			EC	Polytron 3000 NH3 LC	100 ppm	
			EC	Polytron 2000 NH3	200 ppm	
21	50 (271)	100 (543)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
22	50 (271)	100 (543)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
23	20 (74)	100 (368)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 2400 ppm Gas-Library	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL // 600 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
			EC	Polytron 7000 and P 8100 OV1	as EtOH (100 / 200 / 300 ppm)	S = 0.6

List of detectable gases and vapours 2018

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
24	n-Amyl alcohol		n-Pentanol	88.2	0.81	138	1.3	43	1.3	1.06		1.2	1.06	320
	CAS 71-41-0		1-Pentanol	3.04 r		280 °F		109 °F	(48)	(39)		(44)	(39)	IIA
	$C_5H_{11}OH$	$C_5H_{12}O$	Pentan-1-ol		1 ppm = 3.68 mg/m³					1 mg/m³ = 0.27 ppm				T2
			n-Pentyl alcohol											
			n-Butyl carbinol											
25	tert-Amyl alcohol		2-Methylbutan-2-ol	88.2	0.81	102	16	19	1.3	1.4		1.2	1.4	435
	CAS 75-85-4		Dimethyl ethyl carbinol	3.04 r		216 °F		66 °F	(48)	(51)		(44)	(51)	IIA
	$(CH_3)_2C(OH)C_2H_5$	$C_5H_{12}O$	tert-Pentanol	88 v	1 ppm = 3.68 mg/m³					1 mg/m³ = 0.27 ppm				T2
26	n-Amylamine		1-Aminopentane	87.2	0.76	104	31	7	1.3			2.2		
	CAS 110-58-7		Monoamylamine	3.01 r		219 °F		45 °F	(47)			(80)		IIA
	$C_5H_{11}NH_2$	$C_5H_{13}N$	1-Pentane amine	93 v	1 ppm = 3.63 mg/m³					1 mg/m³ = 0.28 ppm				
27	i-Amylchloride		i-Pentylchloride	106.6	0.89	100		1	1.5			1.5		240
	CAS 107-84-6		1-Chloro-3-methylbutane	3.68 r		212 °F		34 °F	(67)			(67)		IIA
	$(CH_3)_2CHC_2H_4Cl$	$C_5H_{11}Cl$	Isoamylchloride	112 v	1 ppm = 4.44 mg/m³					1 mg/m³ = 0.23 ppm				T3
			Isopentylchloride											
28	n-Amylchloride		Amyl chloride	106.6	0.88	108	32	3	1.4			1.6		255
	CAS 543-59-9		1-Chloropentane	3.68 r		226 °F		37 °F	(62)			(71)		IIA
	$C_5H_{11}Cl$	$C_5H_{11}Cl$	Pentylchloride	106 v	1 ppm = 4.44 mg/m³					1 mg/m³ = 0.23 ppm				T3
29	tert-Amyl ethyl ether		Ethyl tert-amyl ether	116.2	0.76	102			1.0**					
	CAS 919-94-8	TAEE	2-Ethoxy-2-methyl butane	4.01 r		216 °F			(48)					
	$C_2H_5OC(CH_3)_2C_2H_5$	$C_7H_{16}O$	2-Methyl-2-ethoxy butane	95 v	1 ppm = 4.84 mg/m³					1 mg/m³ = 0.21 ppm				
			tert-Pentyl ethyl ether											
			Ethyl tert-pentyl ether											
			1.1-Dimethylpropyl ethyl ether											
			Ethyl-1.1-dimethylpropyl ether											
30	i-Amyl formate		Formic acid i-pentylester	116.2	0.88	124	15	22	1.7					320
	CAS 110-45-2		i-Pentyl formate	4.01 r		255 °F		72 °F	(82)					IIA
	$HCOOC_5H_{11}$	$C_6H_{12}O_2$	3-Methyl-1-butylformate	140 v	1 ppm = 4.84 mg/m³					1 mg/m³ = 0.21 ppm				T2
			Isoamyl formate											
			Isopentyl formate											
31	tert-Amyl methyl ether		Methyl-tert-amylether	102.2	0.77	86	76	-18	1.2	1.18			1.5	345
	CAS 994-05-8	TAME	2-Methoxy-2-methyl butane	3.53 r		187 °F		0 °F	(51)	(50)			(64)	IIA
	$CH_3OC(CH_3)_2CH_2CH_3$	$C_6H_{14}O$	2-Methyl-2-methoxybutane	99 v	1 ppm = 4.26 mg/m³					1 mg/m³ = 0.23 ppm				T2
			Methyl-tert-pentylether											
			tert-Pentyl methyl ether											
			1.1-Dimethyl propylmethyl ether											
32	Aniline		Aminobenzene	93.1	1.02	184	0.7	76	1.2	1.2	1.3	1.3	1.2	630
	CAS 62-53-3		Benzenamine	3.21 r		363 °F		169 °F	(47)	(47)	(50)	(50)	(47)	IIA
	$C_6H_5NH_2$	C_6H_7N	Phenylamine		1 ppm = 3.88 mg/m³					1 mg/m³ = 0.26 ppm				T1
33	Anisole		Methoxybenzene	108.1	0.99	154	3.6	41	1.2					475
	CAS 100-66-3	MOB	Phenyl methyl ether	3.73 r		309 °F		106 °F	(54)					IIB
	$C_6H_5OCH_3$	C_7H_8O	Methyl phenyl ether		1 ppm = 4.50 mg/m³					1 mg/m³ = 0.22 ppm				T1
			Phenoxy methane											
34	Antimony pentachloride		Antimony-(V)-chloride	299.0	2.33	150	1	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
	CAS 7647-18-9			10.32 r		302 °F								
	$SbCl_5$	Cl_5Sb			1 ppm = 12.46 mg/m³					1 mg/m³ = 0.08 ppm				
35	Arsenic hydride		Hydrogen arsenide	77.9	Gas	-62	Gas	Gas	3.9		5.1			285
	CAS 7784-42-1		Arsine	2.69 r		-80 °F			(127)		(166)			
	AsH_3	H_3As	Arsenic trihydride		1 ppm = 3.25 mg/m³					1 mg/m³ = 0.31 ppm				T3
36	Benzene		Benzol	78.1	0.88	80	100	-11	1.2	1.2	1.2	1.2	1.2	555
	CAS 71-43-2		Phenyl hydride	2.70 r		176 °F		12 °F	(39)	(39)	(39)	(39)	(39)	IIA
	C_6H_6	C_6H_6	Cyclohexatriene	66 v	1 ppm = 3.25 mg/m³					1 mg/m³ = 0.31 ppm				T1
37	Boron tribromide		Tribromoborane	250.5	2.69	90	72	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
	CAS 10294-33-4		Boron bromide	8.65 r		194 °F								
	BBr_3	BBr_3			1 ppm = 10.44 mg/m³					1 mg/m³ = 0.10 ppm				

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
24	20		CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
	(74)		IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 OV1	as Aald (50 / 100 / 200 ppm)	S = 0.3 (L)
25	20	100	IR	PIR 7000 type 334, P 8700 type 334	100 %LEL ($)	
	(74)	(368)	IR	Polytron 5700 type 334	100 %LEL ($)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
26			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	Polytron 5700 type 340	100 %LEL (?)	
27			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	Polytron 5700 type 340	100 %LEL (?)	
28			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	Polytron 5700 type 340	100 %LEL (?)	
29			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
30			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
31			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
32	2	5	IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
	(7.8)	(19)	IR	Polytron 5700 type 334	50 + 100 %LEL	
33			IR	PIR 7000 type 334, P 8700 type 334	40 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	35 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
34			EC	Polytron 7000 and P 8100 AC	Acid: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
			EC	Polytron 7000 and P 8100 HCl	AnPC: 5 / 10 / 20 ppm / LDL = 0.2 ppm	S = 5.0
35	0.005	0.05	EC	Polytron 7000 and P 8100 Hydrides	AsH3: 0.3 / 1 / 20 ppm / LDL = 0.03 ppm	S = 0.85
	(0.016)	(0.16)	EC	Polytron 7000 and P 8100 Hydrides SC	AsH3: 0.3 / 1 / 1 ppm / LDL = 0.01 ppm	S = 0.65
			EC	Polytron 7000 and P 8100 PH3/AsH3	AsH3: 0.3 / 1 / 20 ppm / LDL = 0.02 ppm	S = 0.5
36	0.6T	1	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD
	(2.0)	(3.3)	IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL // 3600 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
37		1c	EC	Polytron 7000 and P 8100 AC	Acid: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
		(10)	EC	Polytron 7000 and P 8100 HCl	as BCl3 (5 / 10 / 20 ppm)	

List of detectable gases and vapours 2018

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
38	Boron trichloride CAS 10294-34-5 BCl_3	BCl_3	Trichloroborane Boron chloride	117.2 4.05 r	Gas 1 ppm = 4.88 mg/m³	12.6 55 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
										1 mg/m³ = 0.20 ppm				
39	Boron trifluoride CAS 7637-07-2 BF_3	BF_3	Trifluoroborane Boron fluoride	67.8 2.34 r	Gas 1 ppm = 2.83 mg/m³	-100 -148 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
										1 mg/m³ = 0.35 ppm				
40	Bromine CAS 7726-95-6 Br_2	Br_2		159.8 5.52 r	3.12 1 ppm = 6.66 mg/m³	58.8 138 °F	220	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
										1 mg/m³ = 0.15 ppm				
41	1.2-Butadiene CAS 590-19-2 $H_2C=C=CHCH_3$	C_4H_6	Methylallene	54.1 1.87 r	Gas 1 ppm = 2.25 mg/m³	10.8 51 °F	Gas	Gas	1.6 (36)					340 T2
										1 mg/m³ = 0.44 ppm				
42	1.3-Butadiene CAS 106-99-0 $CH_2=CH-CH=CH_2$	C4== C_4H_6	Erythrene Vinylethylene Divinyl Biethylene	54.1 1.87 r	Gas 1 ppm = 2.25 mg/m³	-5 23 °F	Gas	Gas	1.4 (32)	1.4 (32)	2.0 (45)	2.0 (45)	1.4 (32)	415 IIB T2
										1 mg/m³ = 0.44 ppm				
43	1.3-Butadiene monoxide CAS 930-22-3 $H_2C=CH-CHCH_2O$	C_4H_6O	3.4-Epoxybut-1-ene Ethenyl oxirane Vinylethylene oxide	70.1 2.42 r	0.87 1 ppm = 2.92 mg/m³	66 151 °F		<-20 <-4 °F	0.95* (28)					430 T2
										1 mg/m³ = 0.34 ppm				
44	i-Butane CAS 75-28-5 $(CH_3)_3CH$	C_4H_{10}	Isobutane 2-Methylpropane Trimethylmethane 1.1-Dimethylethane R600a	58.1 2.01 r	Gas 1 ppm = 2.42 mg/m³	-12 10 °F	Gas	Gas	1.5 (36)	1.3 (31)	1.6 (39)	1.8 (44)	1.3 (31)	460 IIA T1
										1 mg/m³ = 0.41 ppm				
45	n-Butane CAS 106-97-8 C_4H_{10}	C_4H_{10}	Methylethylmethane R600	58.1 2.01 r	Gas 1 ppm = 2.42 mg/m³	-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 mg/m³ = 0.41 ppm				
46	2-Butanol CAS 78-92-2 $C_2H_5CH(OH)CH_3$	SBA $C_4H_{10}O$	sec-Butyl alcohol Butan-2-ol Methyl ethyl carbinol 2-Hydroxybutane 1-Methyl propanol	74.1 2.56 r 97 v	0.81 1 ppm = 3.09 mg/m³	99 210 °F	17	23 73 °F	1.7 (52)	1.7 (52)	1.7 (52)	1.7 (52)		390 IIB T2
										1 mg/m³ = 0.32 ppm				
47	i-Butanol CAS 78-83-1 $(CH_3)_2CHCH_2OH$	IBA $C_4H_{10}O$	Isobutanol Isobutyl alcohol i-Butyl alcohol 2-Methyl-1-propanol i-Propyl carbinol Isopropyl carbinol	74.1 2.56 r 81 v	0.80 1 ppm = 3.09 mg/m³	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 mg/m³ = 0.32 ppm				
48	n-Butanol CAS 71-36-3 C_4H_9OH	NBA $C_4H_{10}O$	1-Butanol Butan-1-ol n-Butyl alcohol Propyl carbinol 1-Hydroxybutane	74.1 2.56 r	0.81 1 ppm = 3.09 mg/m³	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 mg/m³ = 0.32 ppm				

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
38			EC	Polytron 7000 and P 8100 AC	BCl3: 3 / 10 / 10 ppm / LDL = 0.5 ppm	
			EC	Polytron 7000 and P 8100 HCl	BCl3: 5 / 10 / 20 ppm / LDL = 0.2 ppm	S = 3.0
			EC	Polytron 3000 BCl3	10 ppm	
			EC	Polytron 3000 AC	3 or 10 ppm	
39	0.35 (0.99)	1c (2.8)	EC	Polytron 7000 and P 8100 AC	BF3: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
40	0.1 (0.67)	0.1 (0.67)	EC	Polytron 7000 and P 8100 Cl2	Br2: 1 / 10 / 100 ppm / LDL = 0.05 ppm	S = 1.0
41			IR	PIR 7000 type 334, P 8700 type 334	40 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	30 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
42	2T (4.5)	1 (2.3)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD
			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL // 4900 ppm Gas-Library	
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 OV1	BTD: 20 / 50 / 200 ppm / LDL = 5 ppm	S = 1.2
43			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL ($)	
			IR	Polytron 5700 type 334	100 %LEL ($)	
44	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	performance approved
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 1040 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL	performance approved
			OP	Polytron Pulsar 2	1 // 4 / 8 LELm	CSF = 1.07 (Propane = 1.00) / LEL = 1.5
45	1000 (2421)	800 (1937)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 2800 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL // 700 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL	performance approved
			OP	Polytron Pulsar 2	1 // 4 / 8 LELm	CSF = 0.95 (Propane = 1.00) / LEL = 1.4
46		150 (463)	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	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			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	Polytron 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	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
48	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	Polytron 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	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 OV1	as EtOH (100 / 200 / 300 ppm)	S = 0.65

List of detectable gases and vapours 2018

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
49	tert-Butanol CAS 75-65-0 $(CH_3)_3COH$	TBA $C_4H_{10}O$	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 1 ppm = 3.09 mg/m³	41	11 52 °F	1.4 (43)		2.4 (74) 1 mg/m³ = 0.32 ppm	2.4 (74)		470 IIA T1
50	2-Butenal CAS 123-73-9 $CH_3CH=CHCHO$	C_4H_6O	Crotonaldehyde Crotonic aldehyde Propylene aldehyde	70.1 2.42 r 108 v	0.85	102 216 °F 1 ppm = 2.92 mg/m³	24	8 46 °F	2.1 (61)			2.1 (61) 1 mg/m³ = 0.34 ppm	2.1 (61)	230 IIB T3
51	1-Butene CAS 106-98-9 $C_2H_5CH=CH_2$	C4= C_4H_8	1-Butylene But-1-ene Ethylethylene	56.1 1.94 r	Gas	-6 21 °F 1 ppm = 2.34 mg/m³	Gas	Gas	1.5 (35)	1.6 (37)		1.6 (37) 1 mg/m³ = 0.43 ppm	1.6 (37)	360 IIA T2
52	2-Butene CAS 107-01-7 $CH_3CH=CHCH_3$	C4= C_4H_8	2-Butylene 1.2-Dimethylethylene	56.1 1.94 r	Gas	1 34 °F 1 ppm = 2.34 mg/m³	Gas	Gas		1.6 (37)			1.6 (37) 1 mg/m³ = 0.43 ppm	325 IIB T2
53	i-Butene CAS 115-11-7 $(CH_3)_2C=CH_2$	iC4= C_4H_8	Isobutene i-Butylene Isobutylene 2-Methylpropene 2-Methylprop-1-ene 1.1-Dimethylethylene	56.1 1.94 r	Gas	-7 19 °F 1 ppm = 2.34 mg/m³	Gas	Gas	1.6 (37)	1.6 (37)		1.8 (42) 1 mg/m³ = 0.43 ppm	1.6 (37)	465 IIA T1
54	3-Butene-1-ol CAS 627-27-0 $CH_2=CH(CH_2)_2OH$	C_4H_8O	Allylcarbinol 2-Vinylethan-1-ol Vinyl ethyl alcohol	72.1 2.49 r	0.84	112 234 °F 1 ppm = 3.00 mg/m³		32 90 °F	2.0 (60)			4.7 (141) 1 mg/m³ = 0.33 ppm		IIB
55	1-tert-Butoxy-2.3-epoxypropane CAS 7665-72-7 $CH_2OCHCH_2OC(CH_3)_3$	TBGE $C_7H_{14}O_2$	tert-Butyl glycidyl ether Glycidyl-tert-butyl ether tert-Butoxymethyloxirane 1.1-Dimethylethyl glycidyl ether	130.2 4.49 r	0.91	151 304 °F 1 ppm = 5.43 mg/m³	2.5	41 106 °F	1.1** (60)					
56	2-Butoxyethanol CAS 111-76-2 $C_4H_9OC_2H_4OH$	EGBE $C_6H_{14}O_2$	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 ppm = 4.93 mg/m³	1.2	61 142 °F	1.1 (54)	1.1 (54)	1.1 (54) 1 mg/m³ = 0.20 ppm	1.1 (54)		240 IIB T3
57	2-Butoxyethyl acetate CAS 112-07-2 $CH_3COOC_2H_4OC_4H_9$	EGBEA $C_8H_{16}O_3$	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 1 ppm = 6.68 mg/m³	0.31	74 165 °F	1.0 (67)	0.9 (60)	0.88 (59) 1 mg/m³ = 0.15 ppm	0.88 (59)		355 IIB T2
58	1-Butoxy-2-propanol CAS 5131-66-8 C_4H_9-O-$CH_2CH(OH)CH_3$	2PG1BE $C_7H_{16}O_2$	Propylenglycol-1-butylether 1-Butoxypropan-2-ol	132.2 4.56 r	0.88	170 338 °F 1 ppm = 5.51 mg/m³	1.3	59 138 °F	0.9 (50)					260 IIB T3

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
49	20	100	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
	(62)	(309)	IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL // 3500 ppm Gas-Library	
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL // 2100 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
50		2	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
		(5.8)	IR	PIR 7000 type 334, P 8700 type 334	100 %LEL ($)	
			IR	Polytron 5700 type 334	100 %LEL ($)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
			EC	Polytron 7000 and P 8100 OV1	as C3H6 x 0.5 (30 / 50 / 100 ppm x 0.5)	S = 1.4 (L)
51			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL // 3200 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL // 2400 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
52			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			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 334, P 8700 type 334	20 / 100 %LEL // 3200 ppm Gas-Library	
			IR	Polytron 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	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
54			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
55			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
56	10	50	IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 2200 ppm Gas-Library	
	(49)	(246)	IR	Polytron 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	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 OV1	as EtOH (100 / 200 / 300 ppm)	S = 0.65
57	20	20	IR	PIR 7000 type 334, P 8700 type 334	50 / 100 %LEL	
	(134)	(134)	IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
58			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	

List of detectable gases and vapours 2018

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
59	2-Butyl acetate CAS 105-46-4 $CH_3COOCH(CH_3)C_2H_5$	 $C_6H_{12}O_2$	sec-Butyl acetate 1-Methylpropyl acetate Acetic acid sec butyl ester	116.2 4.01 r 108 v	0.87 1 ppm = 4.84 mg/m³	112 234 °F	25 	16 61 °F	1.3 (63)	1.3 (63)	1.7 (82)	1.7 (82)		410 IIA T2
										1 mg/m³ = 0.21 ppm				
60	i-Butyl acetate CAS 110-19-0 $CH_3COOCH_2CH(CH_3)_2$	 $C_6H_{12}O_2$	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 1 ppm = 4.84 mg/m³	118 244 °F	20 	18 64 °F	1.3 (63)		1.3 (63)	1.3 (63)		420 IIA T2
										1 mg/m³ = 0.21 ppm				
61	n-Butyl acetate CAS 123-86-4 $CH_3COOC_4H_9$	 BuAc $C_6H_{12}O_2$	Acetic acid butylester n-Butyl ethanoate	116.2 4.01 r 99 v	0.88 1 ppm = 4.84 mg/m³	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
										1 mg/m³ = 0.21 ppm				
62	tert-Butyl acetate CAS 540-88-5 $CH_3COOC(CH_3)_3$	 $C_6H_{12}O_2$	Acetic acid tert-butyl ester tert-Butyl ethanoate Acetic acid-1.1-dimethyl ethylester	116.2 4.01 r 110 v	0.86 1 ppm = 4.84 mg/m³	97 207 °F	41 	1 34 °F	1.3 (63)	1.3 (63)	1.5 (73)	1.7 (82)		435 IIA T2
										1 mg/m³ = 0.21 ppm				
63	i-Butyl acrylate CAS 106-63-8 $CH_2=CHCOOC_4H_9$	 $C_7H_{12}O_2$	Isobutyl acrylate Acrylo-i-butylic ester 2-Methyl propyl acrylate 2-Propenoic acid-2-methylpropyl ester Propenoic acid i-butylester	128.2 4.43 r 	0.89 1 ppm = 5.34 mg/m³	132 270 °F	8.8 	 	1.2* (64)					
										1 mg/m³ = 0.19 ppm				
64	n-Butyl acrylate CAS 141-32-2 $CH_2=CHCOOC_4H_9$	 $C_7H_{12}O_2$	Acrylobutylic ester Propenoic acid butyl ester Butyl-2-propenoate	128.2 4.43 r 	0.90 1 ppm = 5.34 mg/m³	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
										1 mg/m³ = 0.19 ppm				
65	tert-Butyl acrylate CAS 1663-39-4 $CH_2=CHCOOC(CH_3)_3$	 TBA $C_7H_{12}O_2$	Propenoic acid-1.1-dimethylethyl ester tert-Butylpropenoate Acrylic acid tert-butylester Acrylo-tert-butylic ester	128.2 4.43 r 109 v	0.88 1 ppm = 5.34 mg/m³	117 243 °F	16 	17 63 °F	1.2 (64)					
										1 mg/m³ = 0.19 ppm				
66	i-Butyl amine CAS 78-81-9 $(CH_3)_2CHCH_2NH_2$	 $C_4H_{11}N$	Isobutyl amine 2-Methylpropyl amine 2-Methyl-1-propane amine 1-Amino-2-methylpropane	73.1 2.52 r 114 v	0.76 1 ppm = 3.05 mg/m³	66 151 °F	149 	-13 9 °F	1.9 (58)	1.47 (45)		3.4 (104)	1.47 (45)	370 IIA T2
										1 mg/m³ = 0.33 ppm				
67	n-Butylamine CAS 109-73-9 $C_4H_9NH_2$	 $C_4H_{11}N$	1-Aminobutane 1-Butane amine Monobutylamine	73.1 2.52 r 105 v	0.74 1 ppm = 3.05 mg/m³	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
										1 mg/m³ = 0.33 ppm				
68	sec-Butylamine CAS 13952-84-6 $C_2H_5CH(CH_3)NH_2$	 B2A $C_4H_{11}N$	2-Aminobutane 2-Butane amine 1-Methyl propylamine	73.1 2.52 r 108 v	0.72 1 ppm = 3.05 mg/m³	63 145 °F	181 	-20 -4 °F	1.7 (52)					IIA
										1 mg/m³ = 0.33 ppm				

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
59	62	200	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
	(300)	(968)	IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	Polytron 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
60	62	150	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
	(300)	(726)	IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
61	62	150	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD
	(300)	(726)	IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL // 3250 ppm Gas-Library	
			IR	Polytron 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	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
62	42	200	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
	(203)	(968)	IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	Polytron 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
63			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	Polytron 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
			EC	Polytron 7000 and P 8100 OV1	as Aald x 2 (50 / 100 / 200 ppm x 2)	S = 0.15 (L)
64	2	10	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	polymerizing/sensor poison
	(11)	(53)	IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 2400 ppm Gas-Library	
			IR	Polytron 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	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 OV1	as Aald x 2 (50 / 100 / 200 ppm x 2)	S = 0.15 (L)
65			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
66	2		CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
	(6.1)		IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
67	2	5c	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
	(6.1)	(15)	IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
68	2		CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
	(6.1)		IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	

List of detectable gases and vapours 2018

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
69	tert-Butylamine CAS 75-64-9 $(CH_3)_3CNH_2$	 $C_4H_{11}N$	2-Amino-2-methylpropane 2-Methyl-2-propane amine 1.1-Dimethylethylamine	73.1 2.52 r 111 v	0.70	45 113 °F 1 ppm = 3.05 mg/m³	394	<-30 <-22 °F	1.7 (52)		1 mg/m³ = 0.33 ppm	1.7 (52)		380 IIA T2
70	Bis(tert-butylamino)silane CAS 186598-40-3 $((CH_3)_3CNH)_2SiH_2$	 BTBAS $C_8H_{22}N_2Si$	N.N'-Di-tert-butylsilane diamine	174.4 6.02 r	0.82	166 331 °F 1 ppm = 7.27 mg/m³	1.5		0.5* (36)		1 mg/m³ = 0.14 ppm			
71	tert-Butyl arsine CAS 4262-43-5 $(CH_3)_3CAsH_2$	 TBAs $C_4H_{11}As$	2-Methyl-i-propyl arsine 1.1-Dimethylethyl arsine	134.1 4.63 r	1.08	68 154 °F 1 ppm = 5.59 mg/m³	166				1 mg/m³ = 0.18 ppm			
72	i-Butyl-i-butyrate CAS 97-85-8 $(CH_3)_2CHCOOCH_2CH(CH_3)_2$	 $C_8H_{16}O_2$	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 1 ppm = 6.01 mg/m³	4	37 99 °F		0.8 (48)	1 mg/m³ = 0.17 ppm	0.96 (58)	0.8 (48)	430 IIA T2
73	i-Butyl chloride CAS 513-36-0 $(CH_3)_2CHCH_2Cl$	 C_4H_9Cl	Isobutyl chloride 1-Chloro-2-methylpropane 2-Methylpropyl chloride	92.6 3.20 r 131 v	0.88	69 156 °F 1 ppm = 3.86 mg/m³	158	-21 -6 °F	2.0 (77)	2.0 (77)	1 mg/m³ = 0.26 ppm	2.0 (77)	2.0 (77)	416 IIA T2
74	n-Butyl chloride CAS 109-69-3 C_4H_9Cl	 NBC C_4H_9Cl	Butylchloride 1-Chlorobutane n-Propylcarbinyl chloride	92.6 3.20 r 117 v	0.89	78 172 °F 1 ppm = 3.86 mg/m³	112	-12 10 °F	1.8 (69)	1.8 (69)	1 mg/m³ = 0.26 ppm	1.8 (69)	1.8 (69)	245 IIA T3
75	tert-Butylchloride CAS 507-20-0 $(CH_3)_3CCl$	 C_4H_9Cl	2-Chloro-2-methylpropane Trimethylchloromethane	92.6 3.20 r	0.84	51 124 °F 1 ppm = 3.86 mg/m³	317	-33 -27 °F	1.8* (69)		1 mg/m³ = 0.26 ppm			541 IIA T1
76	tert-Butylcyclohexane CAS 3178-22-1 $C_6H_{11}C(CH_3)_3$	 $C_{10}H_{20}$	2-Cyclohexyl-2-methyl propane (1.1-Dimethylethyl)cyclohexane	140.2 4.84 r	0.81	171 340 °F 1 ppm = 5.84 mg/m³					1 mg/m³ = 0.17 ppm			
77	i-Butyl formate CAS 542-55-2 $HCOOC_4H_9$	 $C_5H_{10}O_2$	Isobutyl formate Formic acid i-butylester 2-Methylpropyl formate	102.1 3.52 r 123 v	0.88	98 208 °F 1 ppm = 4.25 mg/m³	43	5 41 °F	1.7 (72)		1 mg/m³ = 0.24 ppm	1.7 (72)		320 T2
78	n-Butyl formate CAS 592-84-7 $HCOOC_4H_9$	 $C_5H_{10}O_2$	Formic acid butyl ester Butyl methanoate	102.1 3.52 r 111 v	0.92	106 223 °F 1 ppm = 4.25 mg/m³	31	18 64 °F	1.6 (68)		1 mg/m³ = 0.24 ppm	1.7 (72)		265 T3
79	n-Butyl mercaptan CAS 109-79-5 C_4H_9SH	 NBM $C_4H_{10}S$	1-Butanethiol Butane-1-thiol 1-Mercaptobutane Thiobutyl alcohol	90.2 3.11 r 94 v	0.84	98 208 °F 1 ppm = 3.76 mg/m³	40	1 34 °F	1.4 (53)	1.4 (53)	1 mg/m³ = 0.27 ppm			272 T3
80	tert-Butyl mercaptan CAS 75-66-1 $(CH_3)_3CSH$	 tBM $C_4H_{10}S$	2-Methylpropane-2-thiol 1.1-Dimethyl ethanethiol 2-Methyl-2-propanethiol	90.2 3.11 r	0.83	64 147 °F 1 ppm = 3.76 mg/m³	195	-26 -15 °F	1.3* (49)		1 mg/m³ = 0.27 ppm			
81	Butyl methacrylate CAS 97-88-1 $CH_2=C(CH_3)COOC_4H_9$	 BMA $C_8H_{14}O_2$	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 1 ppm = 5.93 mg/m³	2.7	50 122 °F	1.0 (59)	1.0 (59)	1 mg/m³ = 0.17 ppm		1.0 (59)	290 IIA T3

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
69	2		CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
	(6.1)		IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
70			EC	Polytron 7000 and P 8100 Hydrides	BTBS: 5 / 20 / 20 ppm / LDL = 0.4 ppm	S = 0.08
71			EC	Polytron 7000 and P 8100 Hydrides SC	as PH3 x 0.75 (0.3 / 1.0 ppm x 0.75)	S = 1.5 (L)
72			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
73			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	Polytron 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
74	3		CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	corrosive/sensor poison
	(12)		IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
75			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	Polytron 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
76			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
77			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	Polytron 5700 type 334	100 %LEL (?)	
78			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	Polytron 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
79	0.5	10	IR	PIR 7000 type 334, P 8700 type 334	100 %LEL ($)	
	(1.9)	(38)	IR	Polytron 5700 type 334	100 %LEL ($)	
80			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL ($)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 H2S LC	tBM: 20 / 50 / 100 ppm / LDL = 1 ppm	S = 0.5
81			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	

List of detectable gases and vapours 2018

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	But-2-yne CAS 503-17-3 CH_3CCCH_3	C_4H_6	2-Butyne Dimethyl acetylene Crotonylene	54.1 1.87 r 68 v	0.69	27 81 °F 1 ppm = 2.25 mg/m³	774	<-20 <-4 °F	1.4 (32)	1 mg/m³ = 0.44 ppm		1.4 (32)		
83	i-Butyraldehyde CAS 78-84-2 $(CH_3)_2CHCHO$	C_4H_8O	i-Butanal Isobutanal i-Butyric aldehyde Isobutyraldehyde 2-Methyl propanal Isobutyric aldehyde	72.1 2.49 r 91 v	0.79	64 147 °F 1 ppm = 3.00 mg/m³	184	-24 -11 °F	1.6 (48)	1.6 (48) 1 mg/m³ = 0.33 ppm		1.6 (48)	1.6 (48)	165 IIA T4
84	n-Butyraldehyde CAS 123-72-8 C_3H_7CHO	C_4H_8O	n-Butanal Butyl aldehyd Butyric acid aldehyde n-Butyric aldehyde	72.1 2.49 r 96 v	0.80	75 167 °F 1 ppm = 3.00 mg/m³	113	-11 12 °F	1.7 (51)	1.7 (51) 1 mg/m³ = 0.33 ppm		1.9 (57)	1.8 (54)	190 IIA T4
85	Butyronitrile CAS 109-74-0 C_3H_7CN	C_4H_7N	n-Butyronitrile Butanenitrile Butyric acid anitrile 1-Cyanopropane Propyl cyanide n-Propyl cyanide	69.1 2.39 r 87 v	0.79	117 243 °F 1 ppm = 2.88 mg/m³	20	18 64 °F	1.6 (46)	1 mg/m³ = 0.35 ppm	1.65 (48)	1.65 (48)		500 T1
86	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 1 ppm = 1.83 mg/m³	Gas	n. a.	n. a.	n. a. 1 mg/m³ = 0.55 ppm	n. a.	n. a.	n. a.	n. a.
87	Carbon monoxide CAS 630-08-0 CO	CO	Carbon oxide Carbonic oxide	28.0 0.97 r	Gas	-192 -314 °F 1 ppm = 1.17 mg/m³	Gas	Gas	10.9 (127)	10.9 (127) 1 mg/m³ = 0.86 ppm	12.5 (146)	12.5 (146)	10.9 (127)	605 IIA T1
88	Chlorine CAS 7782-50-5 Cl_2	Cl_2		70.9 2.45 r	Gas	-34 -29 °F 1 ppm = 2.95 mg/m³	Gas	n. a.	n. a.	n. a. 1 mg/m³ = 0.34 ppm	n. a.	n. a.	n. a.	n. a.
89	Chlorine dioxide CAS 10049-04-4 ClO_2	ClO_2	Chlorine peroxide	67.5 2.33 r	Gas	11 52 °F 1 ppm = 2.81 mg/m³	Gas	n. a.	n. a.	n. a. 1 mg/m³ = 0.36 ppm	n. a.	n. a.	n. a.	n. a.
90	Chlorine trifluoride CAS 7790-91-2 ClF_3	ClF_3	Chlorotrifluoride	92.4 3.19 r	Gas	12 54 °F 1 ppm = 3.85 mg/m³	Gas	n. a.	n. a.	n. a. 1 mg/m³ = 0.26 ppm	n. a.	n. a.	n. a.	n. a.
91	2-Chloroacetaldehyde CAS 107-20-0 CH_2ClCHO	C_2H_3ClO	2-Chloro-1-ethanal Monochloroacetaldehyde	78.5 2.71 r	1.21	86 187 °F 1 ppm = 3.27 mg/m³	133			5.7 (186) 1 mg/m³ = 0.31 ppm				
92	Chlorobenzene CAS 108-90-7 C_6H_5Cl	MCB C_6H_5Cl	Phenyl chloride Monochlorobenzene Benzene chloride Chlorobenzol	112.6 3.89 r 82 v	1.11	132 270 °F 1 ppm = 4.69 mg/m³	12	28 82 °F	1.3 (61)	1.3 (61) 1 mg/m³ = 0.21 ppm	1.3 (61)	1.3 (61)	1.4 (66)	590 IIA T1
93	3-Chloro-2-butanone CAS 4091-39-8 $CH_3CHClCOCH_3$	C_4H_7ClO	1-Chloroethyl methyl ketone	106.6 3.68 r	1.06	115 239 °F 1 ppm = 4.44 mg/m³	23		2.3* (102) 1 mg/m³ = 0.23 ppm					
94	1-Chlorobut-2-ene CAS 591-97-9 $CH_3CH=CHCH_2Cl$	C_4H_7Cl	Crotyl chloride	90.6 3.13 r	0.93	85 185 °F 1 ppm = 3.78 mg/m³	494	<0		1 mg/m³ = 0.26 ppm		4.2 (159)		

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
82			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
83			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	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 OV1	as Aald x 2 (50 / 100 / 200 ppm x 2)	S = 0.15 (L)
84	20 (60)		CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL // 5100 ppm Gas-Library	
			IR	Polytron 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	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
			EC	Polytron 7000 and P 8100 OV1	as Aald x 2 (50 / 100 / 200 ppm x 2)	S = 0.15 (L)
85		8 (23)	IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
86	5000 (9167)	5000 (9167)	IR	PIR 7200 and Polytron 8720	2000 ppm / 10 vol% / 30 vol%	performance approved
			IR	Polytron 5720	2000 + 5000 ppm + 1 + 2 + 5 + 10 + 20 + 30 vol%	performance approved
87	30 (35)	50 (58)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			EC	Polytron 7000 and P 8100 CO	CO: 50 / 300 / 1000 ppm / LDL = 5 ppm	
			EC	Polytron 7000 and P 8100 CO LH	CO: 50 / 300 / 300 ppm / LDL = 15 ppm	
			EC	Polytron 7000 and P 8100 CO LS	CO: 200 / 1000 / 5000 ppm / LDL = 10 ppm	
			EC	Polytron 5100 CO	50 + 100 + 200 + 300 + 500 + 1000 ppm	
			EC	Polytron 5100 CO LS	200 + 300 + 500 + 1000 + 2000 + 3000 ppm	+ 4000 + 5000 ppm
			EC	Polytron 5100 CO LH	50 + 100 + 200 + 300 ppm	
			EC	Polytron 3000 CO	100 or 300 or 1000 ppm	
			EC	Polytron 3000 CO LS	300 ppm	
			EC	Polytron 2000 CO	300 or 1000 ppm	
88	0.5 (1.5)	1c (3.0)	EC	Polytron 7000 and P 8100 Cl2	Cl2: 1 / 10 / 100 ppm / LDL = 0.05 ppm	S = 1.0
			EC	Polytron 5100 Cl2	1 + 3 + 5 + 10 + 20 + 30 + 50 ppm	
			EC	Polytron 3000 Cl2	1 or 10 or 25 ppm	
			EC	Polytron 2000 Cl2	10 ppm	
89	0.1 (0.28)	0.1 (0.28)	EC	Polytron 7000 and P 8100 Cl2	ClO2: 1 / 10 / 100 ppm / LDL = 0.05 ppm	S = 0.45 (+/- 20%)
90		0.1c (0.39)	EC	Polytron 7000 and P 8100 AC	ClF3: 3 / 3 / 30 ppm / LDL = 0.5 ppm	allowed for cross calibration with Cl2
			EC	Polytron 3000 AC	3 or 10 ppm	allowed for cross calibration with Cl2
91		1c (3.3)	EC	Polytron 7000 and P 8100 OV1	as C3H6 x 0.5 (30 / 50 / 100 ppm x 0.5)	S = 1.4 (L)
92	10 (47)	75 (352)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	50 / 100 %LEL // 6500 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	performance approved
93			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	40 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
94			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			EC	Polytron 7000 and P 8100 OV1	as Aald x 2 (50 / 100 / 200 ppm x 2)	S = 0.15 (L)

List of detectable gases and vapours 2018

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	1-Chloro-1.1-difluoroethane CAS 75-68-3 CH_3CClF_2	$C_2H_3ClF_2$	Difluoro chloroethane R142b HCFC 142b	100.5 3.47 r	Gas 1 ppm = 4.19 mg/m³	-10 14 °F	Gas	Gas	6.3 (264)	1 mg/m³ = 0.24 ppm		6.2 (260)		IIA
96	Chlorodimethylsilane CAS 1066-35-9 $(CH_3)_2Si(H)Cl$	DMSC C_2H_7ClSi	Dimethylchlorosilane Dimethylsilyl chloride	94.6 3.27 r	0.85 1 ppm = 3.94 mg/m³	35 95 °F	582	<-28 <-18 °F	3.0* (118)	1 mg/m³ = 0.25 ppm				IIC
97	Chloroethanol CAS 107-07-3 $Cl\text{-}CH_2CH_2\text{-}OH$	C_2H_5ClO	2-Chloroethan-1-ol 2-Chloroethyl alcohol Ethylene chlorohydrin Glycol chlorohydrin	80.5 2.78 r	1.21 1 ppm = 3.35 mg/m³	129 264 °F	7.1	55 131 °F	5.0 (168)	4.9 (164)	4.9 (164) 1 mg/m³ = 0.30 ppm	4.9 (164)	5.0 (168)	425 IIA T2
98	Chloromethyl methylether CAS 107-30-2 $ClCH_2OCH_3$	CMME C_2H_5ClO	Chlorodimethyl ether Chloromethoxymethane Methylchloromethyl ether Methoxy methylchloride Dimethylchloroether	80.5 2.78 r	1.06 1 ppm = 3.35 mg/m³	59 138 °F	213	-8 18 °F			1 mg/m³ = 0.30 ppm		4.4 (148)	IIA
99	2-Chloropropene CAS 557-98-2 $CH_2=C(Cl)CH_3$	C_3H_5Cl	2-Chloropropylene i-Propenyl chloride Isopropenyl chloride	76.5 2.64 r 128 v	0.93 1 ppm = 3.19 mg/m³	23 73 °F	915	<-20 <-4 °F	2.5 (80)	1 mg/m³ = 0.31 ppm		4.5 (143)		
100	Chlorosulfonic acid CAS 7790-94-5 HSO_3Cl	$HClO_3S$	Chlorosulfuric acid Sulfuric chlorohydrin Sulfuryl oxychloride	116.5 4.02 r	1.75 1 ppm = 4.85 mg/m³	151 304 °F	0.45	n. a.	n. a.	n. a. 1 mg/m³ = 0.21 ppm	n. a.	n. a.	n. a.	n. a.
101	2-Chlorotoluene CAS 95-49-8 $CH_3C_6H_4Cl$	C_7H_7Cl	1-Chloro-2-methylbenzene o-Chlorotoluene o-Tolyl chloride	126.6 4.37 r	1.08 1 ppm = 5.28 mg/m³	159 318 °F	3.8	43 109 °F	1.3 (69)	1 mg/m³ = 0.19 ppm				550 IIA T1
102	Cumene CAS 98-82-8 $C_6H_5CH(CH_3)_2$	C_9H_{12}	Cumol i-Propyl benzene Isopropyl benzene 2-Phenyl propane	120.2 4.15 r 70 v	0.86 1 ppm = 5.01 mg/m³	152 306 °F	5.3	31 88 °F	0.8 (40)	0.8 (40)	0.9 (45) 1 mg/m³ = 0.20 ppm	0.9 (45)	0.8 (40)	420 IIA T2
103	Cyclobutane CAS 287-23-0 $(CH_2)_4$	C_4H_8	Tetramethylene	56.1 1.94 r	Gas 1 ppm = 2.34 mg/m³	12.5 55 °F	Gas	Gas	1.8 (42)	1.8 (42)	1 mg/m³ = 0.43 ppm	1.8 (42)	1.8 (42)	IIA
104	Cyclohexane CAS 110-82-7 $(CH_2)_6$	C_6H_{12}	Hexahydrobenzene Hexamethylene Hexanaphthene Naphthene	84.2 2.91 r 67 v	0.78 1 ppm = 3.51 mg/m³	81 178 °F	104	-18 0 °F	1.0 (35)	1.0 (35)	1.3 (46) 1 mg/m³ = 0.29 ppm	1.3 (46)	1.2 (42)	260 IIA T3
105	Cyclohexanol CAS 108-93-0 $(CH_2)_5CHOH$	Anol $C_6H_{12}O$	Cyclohexyl alcohol Hexahydrophenol Hydroxycyclohexane Hexalin Hydralin	100.2 3.46 r	0.95 1 ppm = 4.18 mg/m³	161 322 °F	1	61 142 °F	1.2 (50)	1.2 (50) 1 mg/m³ = 0.24 ppm			1.2 (50)	300 IIA T3
106	Cyclohexanone CAS 108-94-1 $(CH_2)_5CO$	Anon $C_6H_{10}O$	Sextone Hexanone Cyclohexyl ketone Ketohexamethylene Pimelic ketone	98.1 3.39 r	0.95 1 ppm = 4.09 mg/m³	156 313 °F	4.5	43 109 °F	1.3 (53)	1.3 (53)	1.1 (45) 1 mg/m³ = 0.24 ppm	1.1 (45)	1.0 (41)	430 IIA T2

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
95	1000 (4188)		IR	PIR 7000 type 334, P 8700 type 334	50 / 100 %LEL // 31000 ppm Gas-Library	
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	100 / 100 %LEL (&)	
			IR	Polytron 5700 type 340	100 %LEL (&)	
96			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
97	1 (3.4)	5 (17)	EC	Polytron 7000 and P 8100 OV1	as EO x 0.5 (20 / 50 / 100 ppm x 0.5)	S = 2.0 (L)
98			IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
99			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	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	45 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
100			EC	Polytron 7000 and P 8100 AC	Acid: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
101		50 (264)	IR	PIR 7000 type 334, P 8700 type 334	40 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	55 / 100 %LEL	
			IR	Polytron 5700 type 340	100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
102	10 (50)	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	Polytron 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	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
103			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
104	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	10 / 100 %LEL // 600 ppm Gas-Library	performance approved
			IR	Polytron 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
105		50 (209)	IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
106	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	Polytron 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	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	

List of detectable gases and vapours 2018

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
107	Cyclohexene CAS 110-83-8 C_6H_{10}	 C_6H_{10}	1.2.3.4-Tetrahydrobenzene Hexanaphthylene Benzene tetrahydride	82.1 2.83 r 70 v	0.81	83 181 °F 1 ppm = 3.42 mg/m³	90	-17 1 °F	1.1 (38)	1.1 (38) 1 mg/m³ = 0.29 ppm		1.2 (41)	1.2 (41)	265 IIA T3
108	Cyclohexene oxide CAS 286-20-4 $(CH_2)_4CHCHO$	 CHO $C_6H_{10}O$	1.2-Epoxy cyclohexane Tetramethylene oxirane 7-Oxabicyclo(4.1.0)heptane	98.1 3.39 r 95 v	0.97	130 266 °F 1 ppm = 4.09 mg/m³	12	24 75 °F	1.5 (61)	 1 mg/m³ = 0.24 ppm		 	 	345 IIB T2
109	Cyclohexylamine CAS 108-91-8 $(CH_2)_5CHNH_2$	 CHA $C_6H_{13}N$	Cylohexane amine Aminocyclohexane Hexahydroaniline Aminohexahydrobenzene	99.2 3.42 r 79 v	0.86	134 273 °F 1 ppm = 4.13 mg/m³	13	27 81 °F	1.1 (45)	1.1 (45) 1 mg/m³ = 0.24 ppm	1.5 (62)	1.5 (62)	1.1 (45)	275 IIA T3
110	Cyclopentane CAS 287-92-3 $(CH_2)_5$	 CP C_5H_{10}	Pentamethylene	70.1 2.42 r 83 v	0.74	49 120 °F 1 ppm = 2.92 mg/m³	346	<-20 <-4 °F	1.4 (41)	1.4 (41) 1 mg/m³ = 0.34 ppm	1.1 (32)	1.5 (44)	1.4 (41)	320 IIA T2
111	Cyclopentanone CAS 120-92-3 $(CH_2)_4CO$	 C_5H_8O	Keto pentamethylene Ketocyclopentane Adipic ketone	84.1 2.90 r 88 v	0.95	131 268 °F 1 ppm = 3.50 mg/m³	11.5	26 79 °F	1.6* (56)	 1 mg/m³ = 0.29 ppm		 	 	430 IIA T2
112	Cyclopentylamine CAS 1003-03-8 $C_5H_9NH_2$	 $C_5H_{11}N$	Aminocyclopentane Cyclopentane-1-amine	85.2 2.94 r 80 v	0.86	107 225 °F 1 ppm = 3.55 mg/m³	24.9		1.3* (46)	 1 mg/m³ = 0.28 ppm		 	 	
113	Cyclopropane CAS 75-19-4 $(CH_2)_3$	 C_3H_6	Trimethylene RC 270	42.1 1.45 r	Gas	-33 -27 °F 1 ppm = 1.75 mg/m³	Gas	Gas	2.4 (42)	2.4 (42) 1 mg/m³ = 0.57 ppm		2.4 (42)	2.4 (42)	495 IIA T1
114	cis-Decahydronaphthalene CAS 493-01-6 $CH(CH_2)_8CH$	 $C_{10}H_{18}$	cis-Bicyclo(4.4.0)decane cis-Decaline Perhydronaphthalene cis-Naphthane	138.3 4.77 r	0.90	196 385 °F 1 ppm = 5.76 mg/m³	1.1	61 142 °F	0.7 (40)	0.7 (40) 1 mg/m³ = 0.17 ppm			0.7 (40)	240 IIA T3
115	Decamethyl cyclopentasiloxane CAS 541-02-6 $Si_5O_5(CH_3)_{10}$	 DMCPS $C_{10}H_{30}O_5Si_5$	Cyclomethicone	370.8 12.80 r	0.96	210 410 °F 1 ppm = 15.45 mg/m³	0.16	77 171 °F	0.7* (108)	 1 mg/m³ = 0.06 ppm		 	 	390 T2
116	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 ppm = 5.93 mg/m³	1.7	46 115 °F	0.7 (42)	0.7 (42) 1 mg/m³ = 0.17 ppm		0.8 (47)	0.7 (42)	200 IIA T4
117	1-Decene CAS 872-05-9 $H_2C=CH(CH_2)_7CH_3$	 $C_{10}H_{20}$	n-Decylene	140.3 4.84 r	0.74	172 342 °F 1 ppm = 5.85 mg/m³	2	<55 <131 °F		0.55 (32) 1 mg/m³ = 0.17 ppm		0.5 (29)		235 T3
118	Deuterium CAS 7782-39-0 D_2	 2D D_2	Heavy Hydrogen Diplogen Dideuterium	4.0 0.14 r	Gas	-250 -418 °F 1 ppm = 0.17 mg/m³	Gas	Gas	6.7 (11)	 1 mg/m³ = 6.00 ppm		5.0 (8.3)		560 T1
119	Diacetone alcohol CAS 123-42-2 $CH_3COCH_2COH(CH_3)_2$	 $C_6H_{12}O_2$	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 ppm = 4.84 mg/m³	1	58 136 °F	1.3 (63)	1.8 (87) 1 mg/m³ = 0.21 ppm	1.8 (87)	1.8 (87)	1.8 (87)	515 IIB T1

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
107		300	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
		(1026)	IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	Polytron 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
108			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
109	2	10	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
	(8.3)	(41)	IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
110		600	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
		(1753)	IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 2100 ppm Gas-Library	
			IR	Polytron 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	Polytron 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
111			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
112			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
113			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
114			IR	PIR 7000 type 334, P 8700 type 334	60 / 100 %LEL (&)	
			IR	Polytron 5700 type 334	100 %LEL (&)	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
115			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	30 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
116			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	Polytron 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	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
117			IR	PIR 7000 type 334, P 8700 type 334	45 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 100 %LEL	
118			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
119	20	50	IR	PIR 7000 type 334, P 8700 type 334	40 / 100 %LEL	
	(97)	(242)	IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	25 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	

List of detectable gases and vapours 2018

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
120	Di-i-amyl ether CAS 544-01-4 $((CH_3)_2CH(CH_2)_2)_2O$	$C_{10}H_{22}O$	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 ppm = 6.60 mg/m³	1.49	45 113 °F	0.6 (40)	1 mg/m³ = 0.15 ppm				
121	Diborane CAS 19287-45-7 B_2H_6	H_6B_2	Boron hydride Boroethane Diboron hexahydride	27.7 0.96 r	Gas	-93 -135 °F 1 ppm = 1.15 mg/m³	Gas	Gas	0.8 (9.2)	1 mg/m³ = 0.87 ppm		0.8 (9.2)		
122	Dibutylamine CAS 111-92-2 $(C_4H_9)_2NH$	DnBA $C_8H_{19}N$	Di-n-butylamine N-Butyl-1-butanamine	129.3 4.46 r	0.76	161 322 °F 1 ppm = 5.39 mg/m³	2.7	42 108 °F	1 mg/m³ = 0.19 ppm			1.1 (59)		260 IIA T3
123	Di-n-butylether CAS 142-96-1 $(C_4H_9)_2O$	$C_8H_{18}O$	1-Butoxybutane 1.1'-Oxybisbutane Dibutylether Butyl ether	130.2 4.49 r 95 v	0.77	141 286 °F 1 ppm = 5.43 mg/m³	6.4	25 77 °F	0.9 (49)	0.9 (49) 1 mg/m³ = 0.18 ppm		1.5 (81)	0.9 (49)	175 IIB T4
124	Di-tert-butyl peroxide CAS 110-05-4 $(CH_3)_3COOC(CH_3)_3$	DTBP $C_8H_{18}O_2$	Bis(1.1-dimethylethyl)peroxide	146.2 5.05 r 81 v	0.79	110 230 °F 1 ppm = 6.09 mg/m³	26	4 39 °F	0.7 (43)	0.74 (45) 1 mg/m³ = 0.16 ppm			1.0 (61)	170 IIB T4
125	1.2-Dichlorobenzene CAS 95-50-1 $C_6H_4Cl_2$	ODCB $C_6H_4Cl_2$	ortho-Dichlorobenzene o-Dichlorobenzol	147.0 5.07 r	1.32	179 354 °F 1 ppm = 6.13 mg/m³	1.33	66 151 °F	1.7 (104)	1 mg/m³ = 0.16 ppm	2.2 (135)	2.2 (135)	2.2 (135)	640 IIA T1
126	1.1-Dichloroethane CAS 75-34-3 CH_3CHCl_2	$C_2H_4Cl_2$	Ethylidene chloride R150a	99.0 3.42 r 296 v	1.17	57 135 °F 1 ppm = 4.13 mg/m³	243	-10 14 °F	5.6 (231)	5.6 (231) 1 mg/m³ = 0.24 ppm	5.4 (223)	5.4 (223)	5.6 (231)	440 IIA T2
127	1.2-Dichloroethane CAS 107-06-2 $ClCH_2CH_2Cl$	EDC $C_2H_4Cl_2$	Ethylene chloride Ethylene dichloride Ethane dichloride R150	99.0 3.42 r 208 v	1.25	84 183 °F 1 ppm = 4.13 mg/m³	87	13 55 °F	4.2 (173)	6.2 (256) 1 mg/m³ = 0.24 ppm	6.2 (256)	6.2 (256)	6.2 (256)	440 IIA T2
128	1.1-Dichloroethylene CAS 75-35-4 $CH_2=CCl_2$	VDC $C_2H_2Cl_2$	1.1-Dichloroethene Vinylidene chloride R1130a	96.9 3.34 r 314 v	1.25	32 90 °F 1 ppm = 4.04 mg/m³	660	-25 -13 °F	6.5 (262)	6.5 (262) 1 mg/m³ = 0.25 ppm	6.5 (262)	6.5 (262)	5.6 (226)	530 IIA T1
129	1.2-Dichloroethylene trans CAS 156-60-5 CHCl=CHCl	$C_2H_2Cl_2$	1.2-Dichloroethene trans Dioform trans R1130	96.9 3.34 r 293 v	1.26	48 118 °F 1 ppm = 4.04 mg/m³	361	-6 21 °F	6.1 (246)	1 mg/m³ = 0.25 ppm			5.6 (226)	440 IIA T2
130	1.1-Dichloro-1-fluoroethane CAS 1717-00-6 CCl_2FCH_3	$C_2H_3Cl_2F$	R141b HCFC 141b	117.0 4.04 r	1.27	32 90 °F 1 ppm = 4.88 mg/m³	648		5.6* (273)	1 mg/m³ = 0.21 ppm				
131	Dichloromethane CAS 75-09-2 CH_2Cl_2	DCM CH_2Cl_2	Methylene chloride Methylene dichloride R30	84.9 2.93 r 518 v	1.33	40 104 °F 1 ppm = 3.54 mg/m³	470	n. a.	13.0 (460)	1 mg/m³ = 0.28 ppm	13.0 (460)	13.0 (460)		605 IIA T1
132	1.2-Dichloropropane CAS 78-87-5 $CH_3CH(Cl)CH_2Cl$	PDC $C_3H_6Cl_2$	1.2-Propylene dichloride R270	113.0 3.90 r 188 v	1.16	96 205 °F 1 ppm = 4.71 mg/m³	51	15 59 °F	3.1 (146)	3.4 (160) 1 mg/m³ = 0.21 ppm	3.4 (160)	3.4 (160)	3.4 (160)	555 IIA T1

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
120			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
121		0.1	EC	Polytron 7000 and P 8100 Hydrides	B2H6: 0.5 / 1 / 1 ppm / LDL = 0.05 ppm	S = 0.4
		(0.12)	EC	Polytron 7000 and P 8100 Hydrides SC	B2H6: 0.3 / 1 / 5 ppm / LDL = 0.02 ppm	S = 0.45
			EC	Polytron 3000 B2H6	0.5 ppm	
122	5		IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
	(27)		IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
123			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL ($)	
			IR	Polytron 5700 type 334	100 %LEL ($)	
124			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
125	10	50c	IR	PIR 7000 type 334, P 8700 type 334	100 / 100 %LEL (&)	
	(61)	(306)	IR	Polytron 5700 type 334	100 %LEL (&)	
126	100	100	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
	(413)	(413)	IR	PIR 7000 type 334, P 8700 type 334	100 %LEL ($)	
			IR	Polytron 5700 type 334	100 %LEL ($)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
127	1T	50	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
	(4.1)	(206)	IR	PIR 7000 type 334, P 8700 type 334	40 / 100 %LEL // 15500 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	40 / 100 %LEL // 15500 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
128	2		CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL (?)	corrosive/sensor poison
	(8.1)					
129		200	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL (?)	corrosive/sensor poison
		(808)	IR	PIR 7000 type 334, P 8700 type 334	50 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
130			IR	PIR 7000 type 334, P 8700 type 334	40 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	85 / 100 %LEL (&)	
			IR	Polytron 5700 type 340	100 %LEL (&)	
131	50	25	IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL // 39000 ppm Gas-Library	performance approved
	(177)	(88)	IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	50 / 100 %LEL // 65000 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
132		75	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL (?)	corrosive/sensor poison
		(353)	IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL // 9300 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	30 / 100 %LEL // 9300 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	

List of detectable gases and vapours 2018

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
133	1.3-Dichloro-2-propanol		1.3-Dichlorohydrin	129.0	1.36	175	0.72	74	3.5*					
	CAS 96-23-1	1.3-DCP	1.3-Dichloro-i-propanol	4.45 r		347 °F		165 °F	(188)					IIA
	$(CH_2Cl)_2CHOH$	$C_3H_6Cl_2O$	1.3-Dichloroisopropyl alcohol		1 ppm = 5.38 mg/m³					1 mg/m³ = 0.19 ppm				
			1.3-Dichloro-2-hydroxypropane											
134	1.3-Dichloropropene		Telone	111.0	1.23	108	37	27	5.3		5.3	5.3		
	CAS 542-75-6	DCP	3-Chloroallyl chloride	3.83 r		226 °F		81 °F	(245)		(245)	(245)		IIA
	$ClCH_2CH=CHCl$	$C_3H_4Cl_2$	1.3-Dichloropropylene	298 v	1 ppm = 4.63 mg/m³					1 mg/m³ = 0.22 ppm				
135	Dichlorosilane		Silicon dichloride	101.0	Gas	8	Gas	Gas	2.5			4.1		185
	CAS 4109-96-0	DCS		3.49 r		46 °F			(105)			(173)		
	SiH_2Cl_2	H_2Cl_2Si			1 ppm = 4.21 mg/m³					1 mg/m³ = 0.24 ppm				T4
136	Dicyclohexyl		Bicyclohexyl	166.3	0.86	227		74	0.6			0.7		240
	CAS 92-51-3		Cyclohexyl cyclohexane	5.74 r		441 °F		165 °F	(42)			(49)		IIA
	$(C_6H_{11})_2$	$C_{12}H_{22}$			1 ppm = 6.93 mg/m³					1 mg/m³ = 0.14 ppm				T3
137	1.3-Dicyclopentadiene		4.7-Methylentetrahydro indene	132.2	0.94	166	3	39		0.8	0.8	0.8	0.8	500
	CAS 77-73-6		Cyclopentadiene dimere	4.56 r		331 °F		102 °F		(44)	(44)	(44)	(44)	IIA
	$C_{10}H_{12}$	$C_{10}H_{12}$	Tetrahydro-4.7-methanoindene		1 ppm = 5.51 mg/m³					1 mg/m³ = 0.18 ppm				T1
138	1.1-Diethoxyethane		Acetal	118.2	0.82	102	35	13	1.6			1.6		230
	CAS 105-57-7		Diethylacetal	4.08 r		216 °F		55 °F	(79)			(79)		
	$CH_3CH(OC_2H_5)_2$	$C_6H_{14}O_2$	Acetaldehyde diethyl acetal	144 v	1 ppm = 4.93 mg/m³					1 mg/m³ = 0.20 ppm				T3
			Ethylidene diethyl ether											
139	Diethoxy methyl silane		Methyl diethoxy silane	134.3	0.84	94			1.0*					
	CAS 2031-62-1	DEMS	Methylhydrogen diethoxy silane	4.64 r		201 °F			(56)					
	$(C_2H_5O)_2SiHCH_3$	$C_5H_{14}O_2Si$			1 ppm = 5.60 mg/m³					1 mg/m³ = 0.18 ppm				
140	Diethylamine		N-Ethylethane amine	73.1	0.70	56	256	<-20	1.7	1.7	1.8	1.8	1.7	310
	CAS 109-89-7	DEA	N.N-Diethylamine	2.52 r		133 °F		<-4 °F	(52)	(52)	(55)	(55)	(52)	IIA
	$(C_2H_5)_2NH$	$C_4H_{11}N$		111 v	1 ppm = 3.05 mg/m³					1 mg/m³ = 0.33 ppm				T2
141	1.2-Diethylbenzene		o-Diethylbenzene	134.2	0.88	183	1.1	55	0.8*					380
	CAS 135-01-3			4.63 r		361 °F		131 °F	(45)					IIA
	$C_6H_4(C_2H_5)_2$	$C_{10}H_{14}$			1 ppm = 5.59 mg/m³					1 mg/m³ = 0.18 ppm				T2
142	Diethyl carbonate		Diethoxy formic acid anhydride	118.1	0.97	126	11	25	1.4	1.4			1.4	445
	CAS 105-58-8	DEC	Carbonic acid diethyl ester	4.08 r		259 °F		77 °F	(69)	(69)			(69)	IIB
	$CO(OC_2H_5)_2$	$C_5H_{10}O_3$		106 v	1 ppm = 4.92 mg/m³					1 mg/m³ = 0.20 ppm				T2
143	Diethylene glycol diethylether		Diethyldiglycol	162.2	0.91	189	0.8		0.9**					
	CAS 112-36-7	DEGDEE	Bis(2-ethoxyethyl)-ether	5.60 r		372 °F			(61)					
	$(C_2H_5OC_2H_4)_2O$	$C_8H_{18}O_3$	Diethylcarbitol		1 ppm = 6.76 mg/m³					1 mg/m³ = 0.15 ppm				
			Ethyldiglyme											
			1.1'-Oxybis(2-ethoxy-ethane)											
			3.6.9-Trioxa undecane											
144	Diethylenglycol dimethylether		Bis(2-methoxyethyl)-ether	134.2	0.94	160	2.2	51	1.3					190
	CAS 111-96-6	DEGDME	Dimethyl diglycol	4.63 r		320 °F		124 °F	(73)					
	$CH_3OC_2H_4OC_2H_4OCH_3$	$C_6H_{14}O_3$	Diglyme		1 ppm = 5.59 mg/m³					1 mg/m³ = 0.18 ppm				T4
			Dimethyl carbitol											
			1.1'-Oxybis(2-methoxy-ethane)											
145	N.N-Diethylethanolamine		2-Diethylaminoethanol	117.2	0.88	161	1.9	51.5	1.8		6.7	6.7		320
	CAS 100-37-8		2-Hydroxy triethylamine	4.05 r		322 °F		125 °F	(88)		(327)	(327)		IIA
	$(C_2H_5)_2NC_2H_4OH$	$C_6H_{15}NO$	2-Diethylaminoethyl alcohol		1 ppm = 4.88 mg/m³					1 mg/m³ = 0.20 ppm				T2

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
133			IR	PIR 7000 type 334, P 8700 type 334	55 / 100 %LEL	
			IR	Polytron 5700 type 334	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	40 / 100 %LEL (&)	
			IR	Polytron 5700 type 340	50 + 100 %LEL (&)	
134		1	IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL // 15900 ppm Gas-Library	performance approved
		(4.6)	IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	40 / 100 %LEL // 21200 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
135			EC	Polytron 7000 and P 8100 AC	DCS: 3 / 10 / 30 ppm / LDL = 0.5 ppm	Check sensor after prolonged exposure
			EC	Polytron 7000 and P 8100 HCl	DCS: 5 / 10 / 20 ppm / LDL = 0.2 ppm	S = 3.0
136			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
137	0.5	5	IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
	(2.8)	(28)	IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	Polytron 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	Polytron 5700 type 340	100 %LEL (?)	
139			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
140	2	25	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
	(6.1)	(76)	IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 NH3 LC	DEA: 100 ppm / LDL = 5 ppm	S = 0.5
			EC	Polytron 7000 and P 8100 NH3 TL	DEA: 100 ppm / LDL = 2 ppm	S = 0.65*
			EC	Polytron 8100 NH3 FL	DEA: 100 ppm / LDL = 2 ppm	S = 0.65* / Polytron 8100 only
141			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 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	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	Polytron 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 (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
			EC	Polytron 7000 and P 8100 OV1	as MeOH (20 / 50 / 200 ppm)	S = 1.5 (L)
144	5		IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
	(28)		IR	Polytron 5700 type 340	100 %LEL (?)	
145	5	10	IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
	(24)	(49)	IR	Polytron 5700 type 340	100 %LEL (?)	
			EC	Polytron 7000 and P 8100 NH3 LC	as NH3 x 2 (50 / 100 ppm x 2)	S = 0.5 (L)

List of detectable gases and vapours 2018

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
146	Diethyl ether CAS 60-29-7 $(C_2H_5)_2O$	 $C_4H_{10}O$	Ethoxy ethane 1.1'-Oxybisethane Diethyl oxide Ethyl ether R610	74.1 2.56 r 111 v	0.71	35 95 °F 1 ppm = 3.09 mg/m³	586	<-20 <-4 °F	1.7 (52)	1.7 (52)	1.9 (59) 1 mg/m³ = 0.32 ppm	1.9 (59)	1.7 (52)	175 IIB T4
147	Diethyl ketone CAS 96-22-0 $(C_2H_5)_2CO$	 DEK $C_5H_{10}O$	3-Pentanone Pentan-3-one Amylketone Dimethylacetone Methacetone Propione	86.1 2.97 r	0.81	102 216 °F 1 ppm = 3.59 mg/m³	36	7 45 °F		1.6 (57)	1.6 (57) 1 mg/m³ = 0.28 ppm	1.6 (57)	1.6 (57)	455 IIB T1
148	Diethylsulfide CAS 352-93-2 $(C_2H_5)_2S$	 $C_4H_{10}S$	Diethyl thioether 1.1'-Thiobisethane 3-Thiapentane	90.2 3.11 r	0.84	92 198 °F 1 ppm = 3.76 mg/m³	66	-10 14 °F	1.0* (38)		1 mg/m³ = 0.27 ppm			
149	1.1-Difluoroethane CAS 75-37-6 CHF_2CH_3	 $C_2H_4F_2$	Ethylidene fluoride R152a	66.1 2.28 r	Gas	-25 -13 °F 1 ppm = 2.75 mg/m³	Gas	Gas	4.0 (110)		1 mg/m³ = 0.36 ppm			455 IIA T1
150	Difluoromethane CAS 75-10-5 CH_2F_2	 CH_2F_2	Methylene fluoride R32	52.0 1.79 r	Gas	-51.7 -61 °F 1 ppm = 2.17 mg/m³	Gas	Gas	13.1 (284)		1 mg/m³ = 0.46 ppm			648 T1
151	1.2-Dimethoxyethane CAS 110-71-4 $(CH_3OCH_2)_2$	 EGDME $C_4H_{10}O_2$	Ethylene glycol dimethyl ether Dimethylglycol Monoglyme 2.5-Dioxahexane Glycol dimethylether	90.1 3.11 r 103 v	0.87	84 183 °F 1 ppm = 3.75 mg/m³	78	-2 28 °F	1.6 (60)	1.6 (60)	1 mg/m³ = 0.27 ppm		1.6 (60)	197 IIB T4
152	Dimethoxymethane CAS 109-87-5 $CH_2(OCH_3)_2$	 Formal $C_3H_8O_2$	Methylal Formaldehyde dimethylacetal Methylene glycol dimethyl ether Formal	76.1 2.63 r 121 v	0.86	42 108 °F 1 ppm = 3.17 mg/m³	426	-31 -24 °F	2.2 (70)	2.2 (70)	2.2 (70) 1 mg/m³ = 0.32 ppm	1.6 (51)	2.5 (79)	235 IIB T3
153	2.2-Dimethoxypropane CAS 77-76-9 $(CH_3)_2C(OCH_3)_2$	 $C_5H_{12}O_2$	Acetone dimethylacetal Dimethyl dimethoxy methane	104.2 3.60 r	0.85	83 181 °F 1 ppm = 4.34 mg/m³	66	-11 12 °F	6.0* (261)		1 mg/m³ = 0.23 ppm			
154	N.N-Dimethyl acetamide CAS 127-19-5 $(CH_3)_2NCOCH_3$	 DMAC C_4H_9NO	Acetic acid dimethyl amide Acetyl dimethylamine N.N-Dimethyl methanamide	87.1 3.01 r	0.94	165 329 °F 1 ppm = 3.63 mg/m³	0.5	66 151 °F	1.8 (65)		1.8 (65) 1 mg/m³ = 0.28 ppm			IIA
155	Dimethylamine CAS 124-40-3 $(CH_3)_2NH$	 DMA C_2H_7N	N-Methylmethanamine	45.1 1.56 r	Gas	7 45 °F 1 ppm = 1.88 mg/m³	Gas	Gas	2.8 (53)	2.8 (53)	2.8 (53) 1 mg/m³ = 0.53 ppm	2.8 (53)	2.8 (53)	400 IIA T2
156	2-Dimethylaminoethanol CAS 108-01-0 $(CH_3)_2NC_2H_4OH$	 $C_4H_{11}NO$	N.N-Dimethylethanolamine N.N-Dimethyl-2-hydroxyethylamine	89.1 3.08 r	0.89	131 268 °F 1 ppm = 3.71 mg/m³	5.6	31 88 °F			1 mg/m³ = 0.27 ppm	1.6 (59)		220 IIA T3

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
146	400	400	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD
	(1235)	(1235)	IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL // 2550 ppm Gas-Library	
			IR	Polytron 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	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 OV1	Et2O: 50 / 50 / 200 ppm / LDL = 10 ppm	S = 0.5
147		200	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
		(718)	IR	PIR 7000 type 334, P 8700 type 334	100 %LEL ($)	
			IR	Polytron 5700 type 334	100 %LEL ($)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
148			EC	Polytron 7000 and P 8100 H2S LC	as THT (20 / 50 / 100 ppm)	S = 0.3
149			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	25 / 100 %LEL	
			IR	Polytron 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 // 6550 ppm Gas-Library	
			IR	Polytron 5700 type 334	10 + 20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL // 6550 ppm Gas-Library	
			IR	Polytron 5700 type 340	10 + 20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (&)	
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	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
152	300	1000	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
	(951)	(3171)	IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 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	Polytron 5700 type 340	100 %LEL (?)	
154	10	10	IR	PIR 7000 type 334, P 8700 type 334	55 / 100 %LEL	
	(36)	(36)	IR	Polytron 5700 type 334	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	35 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
155	2	10	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
	(3.8)	(19)	IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 NH3 LC	DMA: 100 ppm / LDL = 5 ppm	S = 0.5
			EC	Polytron 7000 and P 8100 NH3 TL	DMA: 100 ppm / LDL = 2 ppm	S = 0.65*
			EC	Polytron 8100 NH3 FL	DMA: 100 ppm / LDL = 2 ppm	S = 0.65* / Polytron 8100 only
156			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	

List of detectable gases and vapours 2018

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
157	Dimethylaminopropylamine CAS 109-55-7 $(CH_3)_2N(CH_2)_3NH_2$	DMAPA $C_5H_{14}N_2$	N.N-Dimethyl-1.3-diaminopropane 3-Aminopropyl dimethylamine N.N-Dimethyl-1.3-propandiamine 1-Amino-3-dimethylaminopropane	102.2 3.53 r	0.81	134 273 °F 1 ppm = 4.26 mg/m³	6	35 95 °F	1.9 (81)	1.2 (51) 1 mg/m³ = 0.23 ppm			1.2 (51)	219 IIA T3
158	2.2-Dimethylbutane CAS 75-83-2 $(CH_3)_3CCH_2CH_3$	 C_6H_{14}	Neohexane	86.2 2.98 r 101 v	0.64	50 122 °F 1 ppm = 3.59 mg/m³	348	<-20 <-4 °F	1.2 (43)	1.0 (36) 1 mg/m³ = 0.28 ppm		1.2 (43)		435 IIA T2
159	2.3-Dimethylbutane CAS 79-29-8 $(CH_3)_2CHCH(CH_3)_2$	 C_6H_{14}	Di-i-propyl	86.2 2.98 r 98 v	0.66	58 136 °F 1 ppm = 3.59 mg/m³	255	<-20 <-4 °F	1.2 (43)	1.0 (36) 1 mg/m³ = 0.28 ppm		1.2 (43)		415 IIA T2
160	Dimethyl carbonate CAS 616-38-6 $CO(OCH_3)_2$	DMC $C_3H_6O_3$	Dimethoxy formic acid anhydride Carbonic acid dimethyl ester	90.1 3.11 r	1.07	90 194 °F 1 ppm = 3.75 mg/m³	53	14 57 °F	4.2* (158)	1 mg/m³ = 0.27 ppm				455 T1
161	N.N-Dimethyl cyclohexyl amine CAS 98-94-2 $C_6H_{11}N(CH_3)_2$	DMCHA $C_8H_{17}N$	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/m³	3.6	40 104 °F	0.9 (48)	1 mg/m³ = 0.19 ppm				215 T3
162	Dimethyl disulfide CAS 624-92-0 $(CH_3)_2S_2$	DMDS $C_2H_6S_2$	2.3-Dithiabutane	94.2 3.25 r	1.06	110 230 °F 1 ppm = 3.93 mg/m³	28	10 50 °F	1.1* (43)	1 mg/m³ = 0.25 ppm				370 IIA T2
163	Dimethylether CAS 115-10-6 $(CH_3)_2O$	DME C_2H_6O	Methoxy methane Dimethyl oxide 1.1'-Oxybismethane Methyl ether	46.1 1.59 r	Gas	-25 -13 °F 1 ppm = 1.92 mg/m³	Gas	Gas	2.7 (52)	2.7 (52) 1 mg/m³ = 0.52 ppm		3.4 (65)	2.7 (52)	240 IIB T3
164	Dimethylethylamine CAS 598-56-1 $C_2H_5N(CH_3)_2$	DMEA $C_4H_{11}N$	N-Ethyl dimethylamine N.N-Dimethylethanamine	73.1 2.52 r	0.68	36.5 98 °F 1 ppm = 3.05 mg/m³	527	-36 -33 °F	0.9* (27)	1 mg/m³ = 0.33 ppm				190 T4
165	Dimethylformamide CAS 68-12-2 $HCON(CH_3)_2$	DMF C_3H_7NO	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/m³	3.8	58 136 °F	2.2 (67)	1.8 (55) 1 mg/m³ = 0.33 ppm	2.2 (67)	2.2 (67)	1.8 (55)	440 IIA T2
166	3.4-Dimethyl hexane CAS 583-48-2 $(C_2H_5CHCH_3)_2$	 C_8H_{18}	i-Octane Isooctane	114.2 3.94 r 79 v	0.72	118 244 °F 1 ppm = 4.76 mg/m³	22	2 36 °F	0.8 (38)	0.8 (38) 1 mg/m³ = 0.21 ppm			0.8 (38)	305 IIA T2
167	1.1-Dimethylhydrazine CAS 57-14-7 $(CH_3)_2N\text{-}NH_2$	UDMH $C_2H_8N_2$	N.N-Dimethylhydrazine Dimazine unsym-Dimethylhydrazine	60.1 2.07 r 96 v	0.78	63 145 °F 1 ppm = 2.50 mg/m³	145	-18 0 °F	2.0 (50)	2.4 (60) 1 mg/m³ = 0.40 ppm	2.0 (50)	2.0 (50)	2.4 (60)	240 IIB T3

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
157			IR	PIR 7000 type 334, P 8700 type 334	50 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
158	500		CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
	(1796)		IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	Polytron 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
159	500		CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
	(1796)		IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	Polytron 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 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 334, P 8700 type 334	10 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
161			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 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	85 / 100 %LEL (&)	
			IR	Polytron 5700 type 334	100 %LEL (&)	
			IR	PIR 7000 type 340, P 8700 type 340	40 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
			EC	Polytron 7000 and P 8100 H2S LC	DMDS: 20 / 50 / 100 ppm / LDL = 1 ppm	S = 0.5
163	1000		CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD
	(1921)		IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL // 4050 ppm Gas-Library	
			IR	Polytron 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	Polytron 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 ($)	
			IR	Polytron 5700 type 334	100 %LEL ($)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 NH3 LC	DMEA: 100 ppm / LDL = 5 ppm	
165	5	10	IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL // 5400 ppm Gas-Library	
	(15)	(30)	IR	Polytron 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	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
166	500		CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
	(2379)		IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	Polytron 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
167		0.5	IR	PIR 7000 type 334, P 8700 type 334	100 %LEL ($)	
		(1.3)	IR	Polytron 5700 type 334	100 %LEL ($)	
			EC	Polytron 7000 and P 8100 Hydrazine	UDMH: 1 / 1 / 5 ppm / LDL = 0.02 ppm	S = 0.6

List of detectable gases and vapours 2018

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
168	2.3-Dimethylpentane CAS 565-59-3 $C_2H_5CH(CH_3)CH(CH_3)_2$	 C_7H_{16}	i-Heptane Isoheptane	100.2 3.46 r 98 v	0.70	90 194 °F 1 ppm = 4.18 mg/m³	72	-12 10 °F	1.1 (46)	1 mg/m³ = 0.24 ppm		1.1 (46)		330 IIA T2
169	2.2-Dimethyl propane CAS 463-82-1 $C(CH_3)_4$	 C_5H_{12}	Neopentane Tetramethyl methane tert-Butyl methane tert-Pentane	72.2 2.49 r	Gas	10 50 °F 1 ppm = 3.01 mg/m³	Gas	Gas	1.3 (39)	1 mg/m³ = 0.33 ppm		1.4 (42)		450 IIA T2
170	N.N-Dimethyl-i-propanolamine CAS 108-16-7 $(CH_3)_2NCH_2CH(OH)CH_3$	 $C_5H_{13}NO$	1-Dimethylaminopropan-2-ol	103.2 3.56 r	0.86	126 259 °F 1 ppm = 4.30 mg/m³	18	35 95 °F	2.7* (116)	1 mg/m³ = 0.23 ppm				IIA
171	N.N-Dimethyl-i-propylamine CAS 996-35-0 $(CH_3)_2CHN(CH_3)_2$	 DMIPA $C_5H_{13}N$	1-Dimethyl aminopropane N.N-Dimethyl-1-propane amine	87.2 3.01 r 83 v	0.72	66 151 °F 1 ppm = 3.63 mg/m³	170	<-20 <-4 °F	1.1 (40)	1 mg/m³ = 0.28 ppm				IIA
172	N.N-Dimethyl-n-propyl amine CAS 926-63-6 $(CH_3)_2NC_3H_7$	 DMPA $C_5H_{13}N$	N.N-Dimethyl-1-propanamine Dimethylpropylamine	87.2 3.01 r 98 v	0.72	65 149 °F 1 ppm = 3.63 mg/m³	173	<-20 <-4 °F	1.3 (47)	1 mg/m³ = 0.28 ppm				IIA
173	Dimethyl sulfide CAS 75-18-3 $(CH_3)_2S$	 DMS C_2H_6S	2-Thiapropane Thiobismethane Methyl thiomethane	62.1 2.14 r 100 v	0.85	37 99 °F 1 ppm = 2.59 mg/m³	527	<-20 <-4 °F	2.2 (57)	1 mg/m³ = 0.39 ppm		2.2 (57)		215 IIA T3
174	1.4-Dioxane CAS 123-91-1 $(CH_2)_4O_2$	 $C_4H_8O_2$	Diethylene dioxide Diethylene ether 1.4-Dioxa cyclohexane p-Dioxane	88.1 3.04 r 75 v	1.03	101 214 °F 1 ppm = 3.67 mg/m³	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 $(CH_2)_3O_2$	 $C_3H_6O_2$	1.3-Dioxa cyclopentane Formaldehyde ethylene acetal Dihydro-1.3-dioxol	74.1 2.56 r 100 v	1.06	74 165 °F 1 ppm = 3.09 mg/m³	114	-5 23 °F	2.3 (71)	2.3 (71)	1 mg/m³ = 0.32 ppm		2.3 (71)	245 IIB T3
176	Di-i-propylamine CAS 108-18-9 $((CH_3)_2CH)_2NH$	 DIPA $C_6H_{15}N$	Diisopropylamine 1-Methylethyl-2-propanamine	101.2 3.49 r 105 v	0.72	82 180 °F 1 ppm = 4.22 mg/m³	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 $(C_3H_7)_2NH$	 $C_6H_{15}N$	Di-n-propylamine N-Propyl-1-propane amine	101.2 3.49 r 102 v	0.74	105 221 °F 1 ppm = 4.22 mg/m³	38	7 45 °F	1.2 (51)	1.2 (51)	1 mg/m³ = 0.24 ppm		1.1 (46)	260 IIA T3
178	Dipropylene glycol dimethyl ether CAS 111109-77-4 $CH_3O(CH_2)_3O(CH_2)_3OCH_3$	 DPDME $C_8H_{18}O_3$	Oxybis(methoxypropane) Dimethoxy dipropylene glycol Bis(methoxypropyl)ether	162.2 5.60 r	0.90	175 347 °F 1 ppm = 6.76 mg/m³	0.74	65 149 °F	0.7 (47)	1 mg/m³ = 0.15 ppm				165 IIB T4

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
168	500		CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
	(2088)		IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	Polytron 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
169	1000	1000	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
	(3008)	(3008)	IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	Polytron 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 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	Polytron 5700 type 340	100 %LEL (?)	
171	1		CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
	(3.6)		IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 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	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL	
			IR	Polytron 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	35 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
			EC	Polytron 7000 and P 8100 H2S LC	DMS: 20 / 50 / 100 ppm / LDL = 1 ppm	S = 0.3
174	20	100	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
	(73)	(367)	IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL // 3500 ppm Gas-Library	
			IR	Polytron 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	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
175	100		CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
	(309)		IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 OV1	as EO x 0.5 (20 / 50 / 200 ppm x 0.5)	S = 2.0 (L)
176		5	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
		(21)	IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
177			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	Polytron 5700 type 340	100 %LEL (?)	
178			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	

List of detectable gases and vapours 2018

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
179	Di-i-propyl ether CAS 108-20-3 $(CH_3)_2CHOCH(CH_3)_2$	 $C_6H_{14}O$	Diisopropylether 2-Isopropoxy propane 2.2'-Oxybispropane Isopropyl ether Diisopropyl oxide	102.2 3.53 r 89 v	0.72 1 ppm = 4.26 mg/m³	69 156 °F	175	<-20 <-4 °F	1.0 (43)	1.0 (43)	1.4 (60) 1 mg/m³ = 0.23 ppm	1.4 (60)	1.0 (43)	405 IIA T2
180	Di-n-propyl ether CAS 111-43-3 $(C_3H_7)_2O$	 $C_6H_{14}O$	Dipropyl ether 1-Propoxypropane 1.1'-Oxybispropane	102.2 3.53 r 102 v	0.75 1 ppm = 4.26 mg/m³	90 194 °F	73	-18 0 °F	1.2 (51)	1.18 (50) 1 mg/m³ = 0.23 ppm		1.3 (55)		175 IIA T4
181	Disilane CAS 1590-87-0 Si_2H_6	 DS H_6Si_2	Silicon hexahydride Silico ethane	62.2 2.15 r	Gas 1 ppm = 2.59 mg/m³	-14 7 °F	Gas		1.0* (26)	 1 mg/m³ = 0.39 ppm				
182	Divinyl benzene CAS 1321-74-0 $C_6H_4(CH=CH_2)_2$	 DVB $C_{10}H_{10}$	Diethenyl benzene Vinylstyrene	130.2 4.49 r	0.91 1 ppm = 5.43 mg/m³	195 383 °F	0.9	64 147 °F		 1 mg/m³ = 0.18 ppm	1.1 (60)	0.7 (38)		
183	Divinylether CAS 109-93-3 $(CH_2=CH)_2O$	 DVE C_4H_6O	Divinyloxide Vinylether 1.1'-Oxybisethene Ethenyloxyethene	70.1 2.42 r 97 v	0.77 1 ppm = 2.92 mg/m³	28 82 °F	737	<-20 <-4 °F	1.7 (50)	 1 mg/m³ = 0.34 ppm		1.7 (50)		360 IIB T2
184	Dodecamethyl cyclohexasiloxane CAS 540-97-6 $(OSi(CH_3)_2)_6$	 D6 $C_{12}H_{36}O_6Si_6$	Cyclomethicone 6 DC 246 Fluid	444.9 15.36 r	0.98 1 ppm = 18.54 mg/m³	245 473 °F	0.03		0.43* (80)	 1 mg/m³ = 0.05 ppm				
185	n-Dodecane CAS 112-40-3 $C_{12}H_{26}$	 $C_{12}H_{26}$	Dihexyl	170.3 5.88 r	0.75 1 ppm = 7.10 mg/m³	216 421 °F	0.12	80 176 °F	0.6 (43)	 1 mg/m³ = 0.14 ppm		0.6 (43)		200 IIA T4
186	Epichlorohydrin CAS 106-89-8 $CH_2ClCHCH_2O$	 ECH C_3H_5ClO	1-Chloro-2.3-epoxypropane 2.3-Epoxypropylchloride Chloromethyl oxirane 2-Chloropropylene oxide	92.5 3.19 r 112 v	1.18 1 ppm = 3.85 mg/m³	116 241 °F	16.3	28 82 °F	2.3 (89)	2.3 (89) 1 mg/m³ = 0.26 ppm	3.8 (146)	3.8 (146)	2.3 (89)	385 IIB T2
187	1.2-Epoxybutane CAS 106-88-7 C_4H_8O	 C_4H_8O	Butylene oxide Ethyl oxirane 1.2-Butylen oxide	72.1 2.49 r 81 v	0.83 1 ppm = 3.00 mg/m³	65 149 °F	177	-15 5 °F	1.5 (45)	 1 mg/m³ = 0.33 ppm		1.7 (51)		370 T2
188	Ethane CAS 74-84-0 C_2H_6	 C_2H_6	Methylmethane Dimethyl R170	30.1 1.04 r	Gas 1 ppm = 1.25 mg/m³	-89 -128 °F	Gas	Gas	2.4 (30)	2.4 (30) 1 mg/m³ = 0.80 ppm		3.0 (38)	2.5 (31)	515 IIA T1
189	Ethanol CAS 64-17-5 C_2H_5OH	 EtOH C_2H_6O	Ethyl alcohol Methylcarbinol	46.1 1.59 r 113 v	0.79 1 ppm = 1.92 mg/m³	78 172 °F	58	12 54 °F	3.1 (60)	3.1 (60) 1 mg/m³ = 0.52 ppm	3.3 (63)	3.3 (63)	3.1 (60)	400 IIB T2
190	Ethanol amine CAS 141-43-5 $NH_2C_2H_4OH$	 C_2H_7NO	2-Aminoethanol 2-Hydroxyethylamine Colamine	61.1 2.11 r	1.02 1 ppm = 2.55 mg/m³	172 342 °F	0.5	85 185 °F		 1 mg/m³ = 0.39 ppm	3.0 (76)	3.0 (76)		410 IIA T2

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
179	200	500	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
	(852)	(2129)	IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
180			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
181			EC	Polytron 7000 and P 8100 Hydrides	DS: 5 / 20 / 20 ppm / LDL = 0.3 ppm	S = 0.1
182		10	IR	PIR 7000 type 334, P 8700 type 334	25 / 25 %LEL	only for concentrations < 25 %LEL
		(54)				
183			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	polymerizing - sensor poison
184			IR	PIR 7000 type 334, P 8700 type 334	75 / 100 %LEL (&)	
			IR	Polytron 5700 type 334	100 %LEL (&)	
			IR	PIR 7000 type 340, P 8700 type 340	55 / 100 %LEL (&)	
			IR	Polytron 5700 type 340	100 %LEL (&)	
185			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
186	2T	5	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
	(7.7)	(19)	IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL // 6900 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	40 / 100 %LEL // 9200 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
			EC	Polytron 7000 and P 8100 OV2	ECH: 20 / 50 / 100 ppm / LDL = 5 ppm	S = 0.45
187	1		CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
	(3.0)		IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
			EC	Polytron 7000 and P 8100 OV1	as PO x 2 (20 / 50 / 200 ppm x 2)	S = 0.4 (L)
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	Polytron 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	Polytron 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	1000	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD
	(960)	(1921)	IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL // 4650 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL // 1550 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL	performance approved
			EC	Polytron 7000 and P 8100 OV1	EtOH: 100 / 200 / 300 ppm / LDL = 10 ppm	S = 0.6
190	0.2	3	IR	PIR 7000 type 340, P 8700 type 340	10 / 10 %LEL (&)	only for concentrations < 10 %LEL
	(0.51)	(7.6)				

List of detectable gases and vapours 2018

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
191	2-Ethoxyethanol CAS 110-80-5 $C_2H_5OC_2H_4OH$	EGEE $C_4H_{10}O_2$	Ethyl glycol Ethylene glycol monoethyl ether Ethyl cellosolve Monoethyl glycol ether Oxitol	90.1 3.11 r	0.93 1 ppm = 3.75 mg/m³	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 mg/m³ = 0.27 ppm
192	2-Ethoxyethyl acetate CAS 111-15-9 $CH_3COOC_2H_4OC_2H_5$	EGEEA $C_6H_{12}O_3$	2-Ethoxyethanol acetate Ethyl glycol acetate Ethylene glycol monoethyl ether acetate Acetic acid 2-ethoxyethylester Cellosolve acetate	132.2 4.56 r	0.98 1 ppm = 5.51 mg/m³	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 mg/m³ = 0.18 ppm
193	1-Ethoxy-2-propanol CAS 1569-02-4 $C_2H_5OCH_2CH(OH)CH_3$	PGEE $C_5H_{12}O_2$	1-Ethoxypropan-2-ol Propylene glycol monoethyl ether 2-Propylenglycol-1-ethylether	104.2 3.60 r	0.90 1 ppm = 4.34 mg/m³	130 266 °F	10	42 108 °F	1.3 (56)					255 IIB T3 1 mg/m³ = 0.23 ppm
194	Ethoxy trifluoro butenone CAS 17129-06-5 $C_2H_5OCH{=}CHC(O)CF_3$	ETFBO $C_6H_7F_3O_2$	4-Ethoxy-1.1.1-trifluoro-3-buten-2-one	168.1 5.80 r	1.18 1 ppm = 7.00 mg/m³	159 318 °F	3		1.4* (98)					 1 mg/m³ = 0.14 ppm
195	Ethyl acetate CAS 141-78-6 $CH_3COOC_2H_5$	$C_4H_8O_2$	Acetic acid ethyl ester Ethanoic acid ethyl ester Ethyl ethanoate	88.1 3.04 r 122 v	0.90 1 ppm = 3.67 mg/m³	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 mg/m³ = 0.27 ppm
196	Ethyl acrylate CAS 140-88-5 $CH_2{=}CHCOOC_2H_5$	$C_5H_8O_2$	Acrylic acid ethyl ester 2-Propenoic acid ethyl ester Ethyl propenoate	100.1 3.46 r 115 v	0.92 1 ppm = 4.17 mg/m³	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 1 mg/m³ = 0.24 ppm
197	Ethylamine CAS 75-04-7 $C_2H_5NH_2$	C_2H_7N	Aminoethane Monoethylamine Ethane amine R631	45.1 1.56 r	Gas 1 ppm = 1.88 mg/m³	17 63 °F	Gas	Gas	3.5 (66)	3.5 (66)	3.5 (66)	3.5 (66)	2.68 (50)	385 IIA T2 1 mg/m³ = 0.53 ppm
198	Ethylbenzene CAS 100-41-4 $C_6H_5C_2H_5$	C_8H_{10}	Phenylethane Ethylbenzol	106.2 3.67 r 76 v	0.87 1 ppm = 4.43 mg/m³	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 1 mg/m³ = 0.23 ppm
199	Ethylbromide CAS 74-96-4 C_2H_5Br	C_2H_5Br	Bromoethane Bromoethyl Monobromoethane	109.0 3.76 r 312 v	1.46 1 ppm = 4.54 mg/m³	38 100 °F	513	n. a.	6.7 (304)	6.7 (304)	6.8 (309)	6.8 (309)	6.7 (304)	510 IIB T1 1 mg/m³ = 0.22 ppm

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
191	2	200	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
	(7.5)	(751)	IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
192	2	100	IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
	(11)	(551)	IR	Polytron 5700 type 340	100 %LEL (?)	
193	50		CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
	(217)		IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL // 3250 ppm Gas-Library	
			IR	Polytron 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	Polytron 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	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	35 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
195	200	400	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD
	(734)	(1468)	IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 3300 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL // 3300 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL	performance approved
			OP	Polytron Pulsar 2	1 // 4 / 8 LELm	CSF = 0.68 (Propane = 1.00) / LEL = 2.0
196	2	25	IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
	(8.3)	(104)	IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	25 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 OV1	as Aald x 2 (50 / 100 / 200 ppm x 2)	S = 0.15 (L)
197	5	10	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	corrosive/sensor poison
	(9.4)	(19)	IR	PIR 7000 type 334, P 8700 type 334	100 %LEL ($)	
			IR	Polytron 5700 type 334	100 %LEL ($)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL ($)	
			IR	Polytron 5700 type 340	100 %LEL ($)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL ($)	
			EC	Polytron 7000 and P 8100 NH3 LC	EA: 100 ppm / LDL = 5 ppm	S = 0.7
			EC	Polytron 7000 and P 8100 NH3 TL	EA: 100 ppm / LDL = 1 ppm	S = 1.0*
			EC	Polytron 8100 NH3 FL	EA: 100 ppm / LDL = 1 ppm	S = 1.0* / Polytron 8100 only
198	20	100	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
	(89)	(443)	IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL // 2400 ppm Gas-Library	
			IR	Polytron 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	Polytron 5700 type 340	50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
199		200	IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
		(908)	IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	

List of detectable gases and vapours 2018

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
200	Ethyl-tert-butylether CAS 637-92-3 $C_2H_5OC(CH_3)_3$	ETBE $C_6H_{14}O$	tert-Butyl ethyl ether 2-Methyl-2-ethoxy propane 2-Ethoxy-2-methyl propane Ethyl-1.1-dimethyl ethyl ether	102.2 3.53 r 103 v	0.74	73 163 °F 1 ppm = 4.26 mg/m³	135	-19 -2 °F	1.2 (51)	1 mg/m³ = 0.23 ppm				
201	Ethylchloride CAS 75-00-3 C_2H_5Cl	C_2H_5Cl	Chloroethyl Chloroethane Monochloroethane R160	64.5 2.23 r	Gas	12 54 °F 1 ppm = 2.69 mg/m³	Gas	Gas	3.6 (97)	3.6 (97)	3.8 (102) 1 mg/m³ = 0.37 ppm	3.8 (102)	3.6 (97)	510 IIA T1
202	Ethyl chloroformate CAS 541-41-3 $ClCOOC_2H_5$	$C_3H_5ClO_2$	Ethoxycarbonyl chloride Ethyl chlorocarbonate Chloroformic acid ethyl ester Ethyl chloromethanoate	108.5 3.75 r	1.14	93 199 °F 1 ppm = 4.52 mg/m³	55	16 61 °F	3.7* (167)	1 mg/m³ = 0.22 ppm				500 IIA T1
203	Ethylcyclobutane CAS 4806-61-5 $(CH_2)_3CHC_2H_5$	C_6H_{12}	Ethylcyclotetramethylene	84.2 2.91 r 86 v	0.73	71 160 °F 1 ppm = 3.51 mg/m³		<-20 <-4 °F	1.2 (42)	1.2 (42)	1 mg/m³ = 0.29 ppm	1.2 (42)	1.2 (42)	210 IIA T3
204	Ethylcyclohexane CAS 1678-91-7 $(CH_2)_5CHC_2H_5$	C_8H_{16}	Ethylhexamethylene	112.2 3.87 r 80 v	0.79	132 270 °F 1 ppm = 4.68 mg/m³	13	<21 <70 °F	0.9 (42)	0.9 (42)	1 mg/m³ = 0.21 ppm	0.9 (42)	0.9 (42)	260 IIA T3
205	Ethylcyclopentane CAS 1640-89-7 $(CH_2)_4CHC_2H_5$	C_7H_{14}	Ethylpentamethylene	98.2 3.39 r 88 v	0.77	103 217 °F 1 ppm = 4.09 mg/m³	41	<21 <70 °F	1.1 (45)	1.05 (43)	1 mg/m³ = 0.24 ppm	1.1 (45)	1.05 (43)	260 IIA T3
206	Ethylene CAS 74-85-1 $CH_2=CH_2$	C_2H_4	Ethene Olefiant gas R1150	28.1 0.97 r	Gas	-104 -155 °F 1 ppm = 1.17 mg/m³	Gas	Gas	2.4 (28)	2.3 (27)	1 mg/m³ = 0.85 ppm	2.7 (32)	2.3 (27)	440 IIB T2
207	Ethylenediamine CAS 107-15-3 NH_2-C_2H_4-NH_2	EDA $C_2H_8N_2$	1.2-Diaminoethane 1.2-Ethanediamine Dimethylenediamine	60.1 2.07 r	0.90	116 241 °F 1 ppm = 2.50 mg/m³	12.4	34 93 °F		2.5 (63)	2.5 (63) 1 mg/m³ = 0.40 ppm	2.5 (63)	2.7 (68)	385 IIA T2
208	Ethylene glycol CAS 107-21-1 $HOCH_2CH_2OH$	$C_2H_6O_2$	1.2-Ethanediol Ethane-1.2-diol 1.2-Dihydroxyethane Glycol 2-Hydroxyethanol	62.1 2.14 r	1.11	197 387 °F 1 ppm = 2.59 mg/m³	0.07	111 232 °F	3.2 (83)		3.2 (83) 1 mg/m³ = 0.39 ppm	3.2 (83)		410 IIB T2
209	Ethylene imine CAS 151-56-4 $(CH_2)_2NH$	C_2H_5N	Aziridine Aminoethylene Azirane Azacyclopropane	43.1 1.49 r 117 v	0.83	55 131 °F 1 ppm = 1.80 mg/m³	227	-13 9 °F	3.6 (65)	3.3 (59)	3.3 (59) 1 mg/m³ = 0.56 ppm	3.3 (59)		320 IIB T2

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
200			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	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	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	Polytron 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	Polytron 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	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 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	Polytron 5700 type 340	100 %LEL (?)	
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	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	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	Polytron 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
206			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD
			IR	PIR 7000 type 334, P 8700 type 334	40 / 100 %LEL // 9200 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL	performance approved
			IR	GasSecure GS01	100 %LEL	not measurable by ultrasonic sensor
			EC	Polytron 7000 and P 8100 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	30 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
			EC	Polytron 7000 and P 8100 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

List of detectable gases and vapours 2018

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
210	Ethylene oxide		1.2-Epoxyethane	44.1	Gas	10	Gas	Gas	2.6	2.6	3.0	3.0	2.6	435
	CAS 75-21-8	EO	Oxirane	1.52 r		50 °F			(48)	(48)	(55)	(55)	(48)	IIB
	C_2H_4O	C_2H_4O	Dimethylene oxide		1 ppm = 1.84 mg/m³					1 mg/m³ = 0.54 ppm				T2
211	Ethyl formate		Ethyl methanoate	74.1	0.92	54	266	-20	2.7	2.7	2.8	2.8	2.7	445
	CAS 109-94-4		Formic acid ethyl ester	2.56 r		129 °F		-4 °F	(83)	(83)	(86)	(86)	(83)	IIA
	$HCOOC_2H_5$	$C_3H_6O_2$	Methanoic acid ethyl ester	136 v	1 ppm = 3.09 mg/m³					1 mg/m³ = 0.32 ppm				T2
212	2-Ethylhexanal		2-Ethyl-1-hexanal	128.2	0.82	163	2.4	42		0.9		0.85		185
	CAS 123-05-7		2-Ethylhexaldehyde	4.43 r		325 °F		108 °F		(48)		(45)		IIA
	$C_4H_9CH(C_2H_5)CHO$	$C_8H_{16}O$	2-Ethyl caproaldehyde		1 ppm = 5.34 mg/m³					1 mg/m³ = 0.19 ppm				T4
			Butyl ethyl acetaldehyde											
213	2-Ethylhexanoic acid		2-Ethylcaproic acid	144.2	0.91	227	0.04	105	0.8					
	CAS 149-57-5	2-EHA	i-Octanoic aicd	4.98 r		441 °F		221 °F	(48)					IIA
	$CH_3(CH_2)_3CH(C_2H_5)COOH$	$C_8H_{16}O_2$	3-Heptane carboxylic acid		1 ppm = 6.01 mg/m³					1 mg/m³ = 0.17 ppm				
			2-Ethylhexoic acid											
214	2-Ethylhexyl acrylate		2-Propenoic acid-2-ethylhexyl ester	184.3	0.89	214	0.13	82	0.8	0.7		0.7		245
	CAS 103-11-7		2-Ethylhexyl-2-propenoate	6.36 r		417 °F		180 °F	(61)	(54)		(54)		
	$CH_2=CHCOOCH_2CH(C_2H_5)C_4H_9$	$C_{11}H_{20}O_2$	Acrylic acid (2-ethylhexyl)ester		1 ppm = 7.68 mg/m³					1 mg/m³ = 0.13 ppm				T3
215	2-Ethyl-1-hexylamine		2-Ethylhexylamine	129.3	0.79	169	1.59	50	0.8*					265
	CAS 104-75-6		1-Amino-2-ethylhexane	4.46 r		336 °F		122 °F	(43)					IIA
	$C_4H_9CH(C_2H_5)CH_2NH_2$	$C_8H_{19}N$	2-Ethyl-1-hexanamine		1 ppm = 5.39 mg/m³					1 mg/m³ = 0.19 ppm				T3
			i-Octylamine											
			Isooctylamine											
			3-Aminomethyl heptane											
216	5-Ethylidene-2-norbornene		Ethylidene norbornene	120.2	0.89	146	5.6		0.8*					
	CAS 16219-75-3	ENB	5-Ethylidene-8.9.10-trinorborn-2-ene	4.15 r		295 °F			(40)					
	$CH_3CH=C_7H_8$	C_9H_{12}	5-Ethylidenebicyclo(2.2.1)hept-2-ene		1 ppm = 5.01 mg/m³					1 mg/m³ = 0.20 ppm				
217	Ethyl lactate		Hydroxypropionic acid ethyl ester	118.1	1.03	154	2	46	1.5			1.5		400
	CAS 97-64-3		Lactic acid ethyl ester	4.08 r		309 °F		115 °F	(74)			(74)		IIA
	$CH_3CH(OH)COOC_2H_5$	$C_5H_{10}O_3$	Propanoic acid 2-hydroxy ethylester		1 ppm = 4.92 mg/m³					1 mg/m³ = 0.20 ppm				T2
218	Ethyl mercaptan		Ethanethiol	62.1	0.84	35	576	<-20	2.8	2.8	2.8	2.8	2.8	295
	CAS 75-08-1	EtM	Mercaptoethane	2.14 r		95 °F		<-4 °F	(72)	(72)	(72)	(72)	(72)	IIB
	C_2H_5SH	C_2H_6S	Ethyl sulfhydrate	129 v	1 ppm = 2.59 mg/m³					1 mg/m³ = 0.39 ppm				T3
			Thioethyl alcohol											
219	Ethyl methacrylate		Methacrylic acid ethylester	114.1	0.91	117	16	19	1.4	1.5		1.8	1.5	
	CAS 97-63-2	EMA	2-Methyl-2-propenoic acid ethylester	3.94 r		243 °F		66 °F	(67)	(71)		(86)	(71)	IIA
	$CH_2=C(CH_3)COOC_2H_5$	$C_6H_{10}O_2$	Ethyl methyl acrylate	110 v	1 ppm = 4.75 mg/m³					1 mg/m³ = 0.21 ppm				
			Ethyl-2-methyl-2-propenoate											
220	N-Ethylpiperidine		1-Ethylpiperidine	113.2	0.82	131	10.3	17	1.9*					
	CAS 766-09-6	EPP		3.91 r		268 °F		63 °F	(90)					
	$C_2H_5N(CH_2)_5$	$C_7H_{15}N$			1 ppm = 4.72 mg/m³					1 mg/m³ = 0.21 ppm				
221	Ethylpropionate		Propionic acid ethylester	102.1	0.89	99	27	12	1.8			1.9		455
	CAS 105-37-3		Ethyl propanoate	3.52 r		210 °F		54 °F	(77)			(81)		IIA
	$C_2H_5COOC_2H_5$	$C_5H_{10}O_2$	Propanoic acid ethylester	129 v	1 ppm = 4.25 mg/m³					1 mg/m³ = 0.24 ppm				T1

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
210	1T	1	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD
	(1.8)	(1.8)	IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL // 3900 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	30 / 100 %LEL // 7800 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 OV1	EO: 20 / 50 / 200 ppm / LDL = 5 ppm	S = 1.0
			EC	Polytron 7000 and P 8100 OV2	EO: 20 / 50 / 100 ppm / LDL = 5 ppm	S = 1.0
			EC	Polytron 5100 OV1	EO: 20 + 30 + 50 + 100 + 200 ppm	
			EC	Polytron 5100 OV2	EO: 20 + 30 + 50 + 100 ppm	
			EC	Polytron 3000 C2H4O	50 ppm	
211	100	100	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
	(309)	(309)	IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
			EC	Polytron 7000 and P 8100 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	Polytron 5700 type 334	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	30 / 100 %LEL	
			IR	Polytron 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		IR	PIR 7000 type 334, P 8700 type 334	40 / 40 %LEL (&)	only for concentrations < 40 %LEL
	(38)		IR	PIR 7000 type 340, P 8700 type 340	20 / 30 %LEL (&)	only for concentrations < 30 %LEL
215			IR	PIR 7000 type 334, P 8700 type 334	65 / 100 %LEL (&)	
			IR	Polytron 5700 type 334	100 %LEL (&)	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
216		5	IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
		(25)	IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	Polytron 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	35 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
218	0.5	0.5c	IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
	(1.3)	(1.3)	IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 H2S LC	EtM: 20 / 50 / 100 ppm / LDL = 1 ppm	S = 0.5
219			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
			EC	Polytron 7000 and P 8100 OV1	as Et2O x 2 (50 / 50 / 200 ppm x 2)	S = 0.2 (L)
220			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 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	Polytron 5700 type 340	100 %LEL (?)	

List of detectable gases and vapours 2018

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
222	Ethylpropylether CAS 628-32-0 $C_2H_5OC_3H_7$	$C_5H_{12}O$	1-Ethoxypropane Propylethylether	88.2 3.04 r 128 v	0.73	64 147 °F 1 ppm = 3.68 mg/m³	194	<-20 <-4 °F	1.7 (62)	1 mg/m³ = 0.27 ppm		1.7 (62)		IIB
223	Ethyl vinyl ether CAS 109-92-2 $CH_2=CHOC_2H_5$	EVE C_4H_8O	Vinyl ethyl ether Ethoxyethene	72.1 2.49 r 102 v	0.75	36 97 °F 1 ppm = 3.00 mg/m³	561	<-20 <-4 °F	1.7 (51)	1 mg/m³ = 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 1 ppm = 1.58 mg/m³	Gas	n. a.	n. a.	n. a. 1 mg/m³ = 0.63 ppm	n. a.	n. a.	n. a.	n. a.
225	Fluorobenzene CAS 462-06-6 C_6H_5F	MFB C_6H_5F	Monofluorobenzene Phenyl fluoride	96.1 3.32 r 76 v	1.03	85 185 °F 1 ppm = 4.00 mg/m³	81	-15 5 °F	1.3* (52)	1 mg/m³ = 0.25 ppm				IIA
226	Formaldehyde CAS 50-00-0 HCHO	CH_2O	Methanal Methyl aldehyde Oxomethane Methylene oxide	30.0 1.04 r	Gas	-19 -2 °F 1 ppm = 1.25 mg/m³	Gas	Gas	7.0 (88)	7.0 (88) 1 mg/m³ = 0.80 ppm	7.0 (88)	7.0 (88)	7.0 (88)	424 IIB T2
227	Formic acid CAS 64-18-6 HCOOH	CH_2O_2	Methanoic acid Hydrogen carboxylic acid	46.0 1.59 r	1.22	101 214 °F 1 ppm = 1.92 mg/m³	45	45 113 °F	16.4 (314)	18.0 (345) 1 mg/m³ = 0.52 ppm	18.0 (345)	18.0 (345)	10.0 (192)	520 IIA T1
228	Furan CAS 110-00-9 $(CH)_4O$	Oxol C_4H_4O	Furfuran 1.4-Epoxy-1.3-butadiene Oxacyclopentadiene Divinylene oxide	68.1 2.35 r 104 v	0.94	32 90 °F 1 ppm = 2.84 mg/m³	658	<-20 <-4 °F	2.3 (65)	2.3 (65) 1 mg/m³ = 0.35 ppm		2.3 (65)	2.3 (65)	390 IIB T2
229	Furfuraldehyde CAS 98-01-1 C_4H_3OCHO	$C_5H_4O_2$	Furfural 2-Furaldehyde 2-Furancarboxyaldehyde 2-Furylmethanal Fural	96.1 3.32 r	1.16	162 324 °F 1 ppm = 4.00 mg/m³	1.5	60 140 °F	2.1 (84)	2.1 (84) 1 mg/m³ = 0.25 ppm	2.1 (84)	2.1 (84)	2.1 (84)	316 IIB T2
230	Furfuryl alcohol CAS 98-00-0 $C_4H_3OCH_2OH$	$C_5H_6O_2$	Furfur alcohol 2-Furylmethanol 2-Hydroxymethylfuran 2-Furancarbinol	98.1 3.39 r	1.13	171 340 °F 1 ppm = 4.09 mg/m³	0.53	75 167 °F	1.8 (74)	1.8 (74) 1 mg/m³ = 0.24 ppm	1.8 (74)	1.8 (74)	1.8 (74)	390 IIB T2
231	Germanium hydride CAS 7782-65-2 GeH_4	H_4Ge	Germane Germanium tetrahydride Germanomethane Tetrahydrogermane	76.6 2.64 r	Gas	-88.5 -127 °F 1 ppm = 3.19 mg/m³	Gas		2.0* (64)	1 mg/m³ = 0.31 ppm				
232	Germanium tetrachloride CAS 10038-98-9 $GeCl_4$	Cl_4Ge	Tetrachlorogermane	214.4 7.40 r	1.88	82 180 °F 1 ppm = 8.93 mg/m³	97	n. a.	n. a.	n. a. 1 mg/m³ = 0.11 ppm	n. a.	n. a.	n. a.	n. a.
233	Germanium tetrafluoride CAS 7783-58-6 GeF_4	F_4Ge	Tetrafluorogermane	148.6 5.13 r	Gas	-37 -35 °F 1 ppm = 6.19 mg/m³	Gas	n. a.	n. a.	n. a. 1 mg/m³ = 0.16 ppm	n. a.	n. a.	n. a.	n. a.
234	Heptamethyl trisiloxane CAS 1873-88-7 $((CH_3)_3SiO)_2Si(H)CH_3$	$C_7H_{22}O_2Si_3$	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 ppm = 9.27 mg/m³			0.5* (46)	1 mg/m³ = 0.11 ppm				
235	n-Heptane CAS 142-82-5 C_7H_{16}	C_7H_{16}		100.2 3.46 r 74 v	0.68	98 208 °F 1 ppm = 4.18 mg/m³	47	-7 19 °F	0.8 (33)	0.85 (35) 1 mg/m³ = 0.24 ppm	1.05 (44)	1.0 (42)	1.1 (46)	220 IIA T3
236	1-Heptanol CAS 111-70-6 $C_7H_{15}OH$	$C_7H_{16}O$	Heptan-1-ol Heptyl alcohol 1-Hydroxyheptane	116.2 4.01 r	0.82	175 347 °F 1 ppm = 4.84 mg/m³	0.15	70 158 °F	0.9 (44)	0.9 (44) 1 mg/m³ = 0.21 ppm			1.0 (48)	275 IIB T3

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
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	Polytron 5700 type 340	100 %LEL (?)	
			EC	Polytron 7000 and P 8100 OV1	as EO x 2 (20 / 50 / 200 ppm x 2)	S = 0.5 (L)
224	1 (1.6)	0.1 (0.16)	EC	Polytron 7000 and P 8100 Cl2	F2: 1 / 10 / 100 ppm / LDL = 0.05 ppm	S = 1.0
225			IR	PIR 7000 type 334, P 8700 type 334	70 / 100 %LEL	
			IR	Polytron 5700 type 334	100 %LEL	
226	0.3 (0.38)	0.75 (0.94)	IR	PIR 7000 type 340, P 8700 type 340	10 / 10 %LEL (&)	
			EC	Polytron 7000 and P 8100 OV1	FYDE: 20 / 50 / 100 ppm / LDL = 5 ppm	S = 1.0
227	5 (9.6)	5 (9.6)	EC	Polytron 7000 and P 8100 AC	Acid: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
228			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			EC	Polytron 7000 and P 8100 OV1	as Et2O (50 / 50 / 200 ppm)	S = 0.4 (L)
229		5 (20)	EC	Polytron 7000 and P 8100 OV1	as Aald (50 / 100 / 200 ppm)	S = 0.3 (L)
230		50 (204)	EC	Polytron 7000 and P 8100 OV1	as IPA (100 / 200 / 300 ppm)	S = 0.35 (L)
231		0.2 (0.64)	EC	Polytron 7000 and P 8100 Hydrides	GeH4: 0.3 / 1 / 20 ppm / LDL = 0.05 ppm	S = 0.6
			EC	Polytron 7000 and P 8100 Hydrides SC	GeH4: 0.3 / 1 / 5 ppm / LDL = 0.02 ppm	S = 0.5
232			EC	Polytron 7000 and P 8100 AC	Acid: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
			EC	Polytron 7000 and P 8100 HCl	as SiCl4 (5 / 10 / 20 ppm)	
233			EC	Polytron 7000 and P 8100 AC	GeF4: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
234			IR	PIR 7000 type 334, P 8700 type 334	40 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	25 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
235	500 (2088)	500 (2088)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL // 1700 ppm Gas-Library	
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 425 ppm Gas-Library	
			IR	Polytron 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 = 0.67 (Propane = 1.00) / LEL = 0.8
236			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	

List of detectable gases and vapours 2018

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
237	2-Heptanone CAS 110-43-0 $CH_3COC_5H_{11}$	MAK $C_7H_{14}O$	Heptan-2-one Methyl amyl ketone n-Amyl methyl ketone Methyl pentyl ketone	114.2 3.94 r	0.82	151 304 °F 1 ppm = 4.76 mg/m³	4.5	40 104 °F		1.1 (52)	1.1 (52) 1 mg/m³ = 0.21 ppm	1.1 (52)	1.1 (52)	305 IIA T2
238	1-Heptene CAS 592-76-7 $C_5H_{11}CH=CH_2$	 C_7H_{14}	Hept-1-ene 1-Heptylene	98.2 3.39 r 88 v	0.70	94 201 °F 1 ppm = 4.09 mg/m³	64	-8 18 °F	1.0 (41)	 1 mg/m³ = 0.24 ppm	 	 	 	250 IIB T3
239	Hexamethyl cyclotrisiloxane CAS 541-05-9 $Si_3O_3(CH_3)_6$	 HMCTS $C_6H_{18}O_3Si_3$		222.5 7.68 r	1.02	134 273 °F 1 ppm = 9.27 mg/m³			0.4* (37)	 1 mg/m³ = 0.11 ppm	 	 	 	
240	Hexamethyldisilazane CAS 999-97-3 $(CH_3)_3Si\text{-}NH\text{-}Si(CH_3)_3$	 HMDS $C_6H_{19}NSi_2$	Bis-trimethylsilyl-amine Tetramethyl-3-aza-2.4-disilapentane	161.4 5.57 r	0.77	127 261 °F 1 ppm = 6.73 mg/m³	20		0.8* (54)	 1 mg/m³ = 0.15 ppm	 	 	 	
241	Hexamethyldisiloxane CAS 107-46-0 $(CH_3)_3Si\text{-}O\text{-}Si(CH_3)_3$	 HMDSO $C_6H_{18}OSi_2$	Tetramethyl-3-oxa-2.4-disilapentane	162.4 5.61 r 93 v	0.76	101 214 °F 1 ppm = 6.77 mg/m³	20	-8 18 °F	0.7 (47)	 1 mg/m³ = 0.15 ppm	 	 	 	310 IIB T2
242	n-Hexane CAS 110-54-3 C_6H_{14}	 C_6H_{14}	Hexyl hydride	86.2 2.98 r 81 v	0.66	69 156 °F 1 ppm = 3.59 mg/m³	162	<-20 <-4 °F	1.0 (36)	1.0 (36) 1 mg/m³ = 0.28 ppm	1.1 (40)	1.1 (40)	1.0 (36)	230 IIA T3
243	1-Hexanol CAS 111-27-3 $C_6H_{13}OH$	 $C_6H_{14}O$	Hexan-1-ol Hexyl alcohol Amyl carbinol 1-Hydroxyhexane	102.2 3.53 r	0.82	157 315 °F 1 ppm = 4.26 mg/m³	0.9	60 140 °F	1.1 (47)	1.1 (47) 1 mg/m³ = 0.23 ppm	 	1.2 (51)	1.2 (51)	280 IIB T3
244	2-Hexanone CAS 591-78-6 $CH_3COC_4H_9$	 MBK $C_6H_{12}O$	Hexan-2-one Methyl butyl ketone Butyl methyl ketone	100.2 3.46 r 93 v	0.81	128 262 °F 1 ppm = 4.18 mg/m³	12.8	23 73 °F	1.2 (50)	1.2 (50) 1 mg/m³ = 0.24 ppm	 	1.2 (50)	1.2 (50)	420 IIA T2
245	3-Hexanone CAS 589-38-8 $C_2H_5COC_3H_7$	 $C_6H_{12}O$	Hexan-3-one Ethylpropylketone	100.2 3.46 r 76 v	0.82	123 253 °F 1 ppm = 4.18 mg/m³	13.5	20 68 °F	1.0 (42)	 1 mg/m³ = 0.24 ppm	 	1.0 (42)	 	 IIA
246	1-Hexene CAS 592-41-6 $C_4H_9CH=CH_2$	 C_6H_{12}	Hex-1-ene Butyl ethylene Hexylene	84.2 2.91 r 94 v	0.67	63 145 °F 1 ppm = 3.51 mg/m³	199	<-20 <-4 °F	1.2 (42)	 1 mg/m³ = 0.29 ppm	 	1.2 (42)	 	255 IIB T3
247	2-Hexene CAS 592-43-8 $CH_3(CH_2)_2CH=CHCH_3$	 C_6H_{12}	Hex-2-en	84.2 2.91 r	0.69	69 156 °F 1 ppm = 3.51 mg/m³	193		1.2* (42)	 1 mg/m³ = 0.29 ppm	 	 	 	

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
237	50	100	IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
	(238)	(476)	IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
238			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	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 OV1	as Aald x 2 (50 / 100 / 200 ppm x 2)	S = 0.15 (L)
239			IR	PIR 7000 type 334, P 8700 type 334	65 / 100 %LEL	
			IR	Polytron 5700 type 334	100 % LEL	
			IR	PIR 7000 type 340, P 8700 type 340	50 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
240			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 OV1	as MeOH (20 / 50 / 200 ppm)	S = 1.5 (L)
241			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL // 2450 ppm Gas-Library	
			IR	Polytron 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	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 OV1	as MeOH (20 / 50 / 200 ppm)	S = 0.95 (L)
242	50	500	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD
	(180)	(1796)	IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL // 2500 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL // 500 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL	performance approved
			OP	Polytron Pulsar 2	1 // 4 / 8 LELm	CSF = 0.77 (Propane = 1.00) / LEL = 1.0
243	50		IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
	(213)		IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
244	5	100	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
	(21)	(418)	IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
245			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
246			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	Polytron 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 960 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 OV1	as Aald x 2 (50 / 100 / 200 ppm x 2)	S = 0.15 (L)
247			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	Polytron 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	

List of detectable gases and vapours 2018

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
248	n-Hexylamine CAS 111-26-2 $C_6H_{13}NH_2$	 $C_6H_{15}N$	1-Aminohexane 1-Hexanamine	101.2 3.49 r	0.77	131 268 °F 1 ppm = 4.22 mg/m³	10.6	27 81 °F	2.1* (89)	1 mg/m³ = 0.24 ppm				
249	Hydrazine CAS 302-01-2 $H_2N\text{-}NH_2$	 H_4N_2	Diazane Diamine	32.0 1.10 r	1.01	113 235 °F 1 ppm = 1.33 mg/m³	21	40 104 °F	4.7 (63)	1 mg/m³ = 0.75 ppm	2.9 (39)			270 T3
250	Hydrogen CAS 1333-74-0 H_2	 H_2	R 702	2.0 0.07 r	Gas	-253 -423 °F 1 ppm = 0.08 mg/m³	Gas	Gas	4.0 (3.3)	4.0 (3.3)	1 mg/m³ = 12.00 ppm	4.0 (3.3)	4.0 (3.3)	560 IIC T1
251	Hydrogen bromide CAS 10035-10-6 HBr	 HBr	Hydrobromic acid	80.9 2.79 r	Gas	-67 -89 °F 1 ppm = 3.37 mg/m³	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
252	Hydrogen chloride CAS 7647-01-0 HCl	 HCl	Hydrochloric acid Muriatic acid	36.5 1.26 r	Gas	-85 -121 °F 1 ppm = 1.52 mg/m³	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
253	Hydrogen cyanide CAS 74-90-8 HCN	 AC CHN	Hydrocyanic acid Formonitrile Prussic acid	27.0 0.93 r	0.69	26 79 °F 1 ppm = 1.13 mg/m³	817	<-20 <-4 °F	5.4 (61)	5.4 (61)	5.6 (63)	5.6 (63)	5.4 (61)	535 IIB T1
254	Hydrogen fluoride CAS 7664-39-3 HF	 HF-A HF	Hydrofluoric acid	20.0 0.69 r	Gas	19.5 67 °F 1 ppm = 0.83 mg/m³	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
255	Hydrogen iodide CAS 10034-85-2 HI	 HI	Hydroiodic acid anhydrous	127.9 4.41 r	Gas	-35 -31 °F 1 ppm = 5.33 mg/m³	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
256	Hydrogen peroxide CAS 7722-84-1 H_2O_2	 H_2O_2	Hydrogen dioxide Hydroperoxide Dihydrogen dioxide	34.0 1.17 r	1.24	107 225 °F 1 ppm = 1.42 mg/m³	1.9	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
257	Hydrogen selenide CAS 7783-07-5 H_2Se	 H_2Se	Selane Selenium hydride Dihydrogen selenide	81.0 2.80 r	Gas	-41 -42 °F 1 ppm = 3.38 mg/m³	Gas		4.0* (135)	1 mg/m³ = 0.30 ppm				
258	Hydrogen sulfide CAS 7783-06-4 H_2S	 H_2S	Hydrosulfuric acid Sulfuretted hydrogen Sulfane	34.1 1.18 r	Gas	-60 -76 °F 1 ppm = 1.42 mg/m³	Gas	Gas	3.9 (55)	4.0 (57)	4.0 (57)	4.0 (57)	4.0 (57)	270 IIB T3
259	Isoprene CAS 78-79-5 $CH_2=C(CH_3)CH=CH_2$	 C_5H_8	2-Methyl-1.3-butadiene	68.1 2.35 r 62 v	0.68	34 93 °F 1 ppm = 2.84 mg/m³	604	<-20 <-4 °F	1.0 (28)	1 mg/m³ = 0.35 ppm		1.5 (43)		220 IIB T3
260	Lead tetraethyl CAS 78-00-2 $Pb(C_2H_5)_4$	 TEL $C_8H_{20}Pb$	Tetraethyl lead Tetraethylplumbane	323.4 11.16 r	1.65	180 356 °F 1 ppm = 13.48 mg/m³	0.3	80 176 °F	1.8 (243)	1 mg/m³ = 0.07 ppm	1.8 (243)	1.8 (243)		
261	D-Limonene CAS 5989-27-5 $CH_2C(CH_3)C_6H_8CH_3$	 $C_{10}H_{16}$	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 1 ppm = 5.68 mg/m³	2	48 118 °F	0.7 (40)	1 mg/m³ = 0.18 ppm				235 IIA T3

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
248			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	Polytron 5700 type 340	100 %LEL (?)	
249	0.017T	1	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
	(0.023)	(1.3)	EC	Polytron 7000 and P 8100 Hydrazine	N2H4: 0.3 / 1 / 5 ppm / LDL = 0.02 ppm	S = 1.0
			EC	Polytron 5100 Hydrazine	N2H4: 0.3 + 0.5 + 1 + 3 + 5 + 10 + 20 ppm	
			EC	Polytron 3000 Hydrazine	1 ppm	
250			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD
			EC	Polytron 7000 and P 8100 H2	H2: 500 / 1000 / 3000 ppm / LDL = 15 ppm	
			EC	Polytron 5100 H2	50 + 100 + 200 + 300 + 500 + 1000 ppm	+ 2000 + 3000 ppm
			EC	Polytron 3000 H2	1000 or 3000 ppm	
251	2	3c	EC	Polytron 7000 and P 8100 AC	HBr: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
	(6.7)	(10)	EC	Polytron 7000 and P 8100 HCl	HBr: 20 / 30 / 100 ppm / LDL = 1 ppm	S = 1.0
			EC	Polytron 3000 AC	3 or 10 ppm	
252	2	5c	EC	Polytron 7000 and P 8100 AC	HCl: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
	(3.0)	(7.6)	EC	Polytron 7000 and P 8100 HCl	HCl: 20 / 30 / 100 ppm / LDL = 1 ppm	S = 1.0
			EC	Polytron 3000 AC	10 ppm	
			EC	Polytron 3000 HCl	30 ppm	
253		10	EC	Polytron 7000 and P 8100 HCN	HCN: 10 / 50 / 50 ppm / LDL = 1.5 ppm	
		(11)	EC	Polytron 7000 and P 8100 HCN LC	HCN: 5 / 50 / 50 ppm / LDL = 0.1 ppm	
			EC	Polytron 5100 HCN LC	5 + 10 + 20 + 30 + 50 ppm	
			EC	Polytron 3000 HCN	50 ppm	
254	1	3	EC	Polytron 7000 and P 8100 AC	HF: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
	(0.83)	(2.5)	EC	Polytron 5100 AC	HF: 3 + 5 + 10 + 20 + 30 ppm	
			EC	Polytron 3000 AC	10 ppm	
255			EC	Polytron 7000 and P 8100 AC	Acid: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
256		1	EC	Polytron 7000 and P 8100 H2O2 HC	H2O2: 1000 / 4000 / 7000 ppm / LDL = 100 ppm	
		(1.4)	EC	Polytron 7000 and P 8100 H2O2 LC	H2O2: 1 / 5 / 300 ppm / LDL = 0.1 ppm	
			EC	Polytron 5100 H2O2 LC	1 + 3 + 5 + 10 + 20 + 30 + 50 + 100 ppm	+ 200 + 300 ppm
257	0.015	0.05	EC	Polytron 7000 and P 8100 Hydrides	SeH2: 0.5 / 1 / 1 ppm / LDL = 0.3 ppm	S = 0.4
	(0.051)	(0.17)				
258	5	4	EC	Polytron 7000 and P 8100 H2S	H2S: 5 / 50 / 100 ppm / LDL = 0.5 ppm	P 8100 performance approved (FM)
	(7.1)	(5.7)	EC	Polytron 7000 and P 8100 H2S HC	H2S: 100 / 500 / 1000 ppm / LDL = 10 ppm	
			EC	Polytron 7000 and P 8100 H2S LC	H2S: 10 / 50 / 100 ppm / LDL = 1 ppm	P 8100 performance approved (FM)
			EC	Polytron 5100 H2S	5 + 10 + 20 + 30 + 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 or 50 or 100 ppm	
			EC	Polytron 2000 H2S	20 or 100 ppm	
259	3		CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	polymerizing/sensor poison
	(8.5)		IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	45 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
260	0.004	0.006	IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
	(0.054)	(0.081)	IR	Polytron 5700 type 340	100 %LEL (?)	
261	5		IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
	(28)		IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	

List of detectable gases and vapours 2018

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
262	Mesityl oxide CAS 141-79-7 $(CH_3)_2C=CHCOCH_3$	 MO $C_6H_{10}O$	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 1 ppm = 4.09 mg/m³	11	24 75 °F		1.6 (65)	1.4 (57) 1 mg/m³ = 0.24 ppm	1.4 (57)	1.4 (57)	340 IIA T2
263	Methacrylic acid CAS 79-41-4 $CH_2=C(CH_3)COOH$	 $C_4H_6O_2$	2-Methyl-2-propenoic acid a-Methylacrylic acid	86.1 2.97 r	1.02	161 322 °F 1 ppm = 3.59 mg/m³	0.87	74 165 °F	1.0 (36)			1.6 (57) 1 mg/m³ = 0.28 ppm		355 IIB T2
264	Methane CAS 74-82-8 CH_4	 CH_4	Methyl hydride R50	16.0 0.55 r	Gas	-162 -260 °F 1 ppm = 0.67 mg/m³	Gas	Gas	4.4 (29)	4.4 (29)		5.0 (33) 1 mg/m³ = 1.50 ppm	4.4 (29)	595 IIA T1
265	Methanol CAS 67-56-1 CH_3OH	 MeOH CH_4O	Methyl alcohol Carbinol	32.0 1.10 r 152 v	0.79	65 149 °F 1 ppm = 1.33 mg/m³	129	9 48 °F	6.0 (80)	6.0 (80)	6.0 (80) 1 mg/m³ = 0.75 ppm	6.0 (80)	5.5 (73)	440 IIA T2
266	3-Methoxybutanol CAS 2517-43-3 $CH_3CH(OCH_3)CH_2CH_2OH$	 $C_5H_{12}O_2$	3-Methoxy-1-butanol 1.3-Butyleneglycol monomethyl ether	104.2 3.60 r	0.93	161 322 °F 1 ppm = 4.34 mg/m³	1.3	74 165 °F	1.5* (65)					 IIB
267	4-Methoxy cylochexanone CAS 13482-23-0 $CH_3OCH(CH_2)_4CO$	 $C_7H_{12}O_2$	p-Methoxy cyclohexanone	128.2 4.43 r	0.98	189 372 °F 1 ppm = 5.34 mg/m³			1.2** (64)					
268	Methoxy dihydropyrane CAS 4454-05-1 $OCH=CH(CH_2)_2CHOCH_3$	 MDHP $C_6H_{10}O_2$	3.4-Dihydro-2-methoxypyrane 2-Methoxy-3.4-dihydropyrane	114.1 3.94 r	1.00	127 261 °F 1 ppm = 4.75 mg/m³	13		1.0* (48)					
269	2-Methoxyethanol CAS 109-86-4 $CH_3OC_2H_4OH$	 EGME $C_3H_8O_2$	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 1 ppm = 3.17 mg/m³	12	39 102 °F	2.5 (79)	1.8 (57)	1.8 (57) 1 mg/m³ = 0.32 ppm	1.8 (57)	2.4 (76)	285 IIB T3
270	1-Methoxy-2-propanol CAS 107-98-2 $CH_3OCH_2CH(OH)CH_3$	 PGME $C_4H_{10}O_2$	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 1 ppm = 3.75 mg/m³	13	32 90 °F	1.8 (68)		1.6 (60) 1 mg/m³ = 0.27 ppm	1.6 (60)		270 IIB T3
271	Methoxy propoxy propanol CAS 34590-94-8 $CH_3OC_3H_6OC_3H_6OH$	 DPGME $C_7H_{16}O_3$	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 1 ppm = 6.18 mg/m³	0.7	70 158 °F	1.1 (68)	1.1 (68)	1.1 (68) 1 mg/m³ = 0.16 ppm	1.1 (68)		270 IIA T3

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
262	2 (8.2)	25 (102)	EC	Polytron 7000 and P 8100 OV1	as EtOH (100 / 200 / 300 ppm)	S = 0.6 (L)
263	50 (179)	20 (72)	EC	Polytron 7000 and P 8100 OV1	as Aald x 2 (50 / 100 / 200 ppm x 2)	S = 0.15 (L)
264			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD
			IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL // 6600 ppm // 100 vol% Gas-Libr.	performance approved
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL // 100 vol-% Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	30 / 100 %LEL // 13200 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL	performance approved
			IR	GasSecure GS01	100 %LEL	min. conc. for ultrasonic sensor: 4400 ppm
			OP	Polytron Pulsar 2	1 // 4 / 8 LELm	CSF = 1.57 (Propane = 1.00) / LEL = 4.4
265	200 (267)	200 (267)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD
			IR	PIR 7000 type 334, P 8700 type 334	10 / 100 %LEL // 5500 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL // 2500 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL (!)	performance approved
			EC	Polytron 7000 and P 8100 OV1	MeOH: 20 / 50 / 200 ppm / LDL = 5 ppm	S = 1.2
266			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
267			IR	PIR 7000 type 334, P 8700 type 334	60 / 100 %LEL (&)	
			IR	Polytron 5700 type 334	100 %LEL (&)	
			IR	PIR 7000 type 340, P 8700 type 340	35 / 100 %LEL (&)	
			IR	Polytron 5700 type 340	50 + 100 %LEL (&)	
268			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
269	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	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 OV1	as MeOH (20 / 50 / 200 ppm)	S = 1.4 (L)
270	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	performance approved
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 1600 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
271	50 (309)	100 (618)	IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	

List of detectable gases and vapours 2018

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	1-Methoxy-2-propyl acetate CAS 108-65-6 $CH_3COOC_3H_6OCH_3$	PGMEA $C_6H_{12}O_3$	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 1 ppm = 5.51 mg/m³	43 109 °F	1.3 (72)			1.5 (83) 1 mg/m³ = 0.18 ppm		IIB
273	Methyl acetate CAS 79-20-9 CH_3COOCH_3	 $C_3H_6O_2$	Acetic acid methyl ester Methyl ethanoate Ethanoic acid methyl ester	74.1 2.56 r 154 v	0.93	57 135 °F	228 1 ppm = 3.09 mg/m³	-13 9 °F	3.1 (96)	3.1 (96)	3.1 (96)	3.1 (96) 1 mg/m³ = 0.32 ppm	3.2 (99)	505 IIA T1
274	Methyl acrylate CAS 96-33-3 $CH_2=CHCOOCH_3$	 $C_4H_6O_2$	Acrylic acid methyl ester Methyl propenoate Methoxycarbonylethylene	86.1 2.97 r 113 v	0.95	80 176 °F	91 1 ppm = 3.59 mg/m³	-3 27 °F	2.0 (72)	1.95 (70)	2.8 (100)	2.8 (100) 1 mg/m³ = 0.28 ppm	2.4 (86)	415 IIB T2
275	Methylallylchloride CAS 563-47-3 $CH_2=C(CH_3)CH_2Cl$	 C_4H_7Cl	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 1 ppm = 3.78 mg/m³	-12 10 °F	2.3 (87)	2.1 (79)		3.2 (121) 1 mg/m³ = 0.26 ppm		476 IIA T1
276	Methylamine CAS 74-89-5 CH_3NH_2	MA CH_5N	Aminomethane Monomethylamine R630	31.1 1.07 r	Gas	-6 21 °F	Gas 1 ppm = 1.30 mg/m³	Gas	4.9 (63)	4.2 (54)	4.9 (63)	4.9 (63) 1 mg/m³ = 0.77 ppm	4.2 (54)	430 IIA T2
277	Methyl-i-amyl ketone CAS 110-12-3 $CH_3COCH_2CH_2CH(CH_3)_2$	MiAK $C_7H_{14}O$	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 1 ppm = 4.76 mg/m³	35 95 °F	1.0 (48)		1.0 (48)	1.0 (48) 1 mg/m³ = 0.21 ppm		455 IIA T1
278	Methyl bromide CAS 74-83-9 CH_3Br	 CH_3Br	Bromomethane Monobromomethane R40B1	94.9 3.28 r	Gas	4 39 °F	Gas 1 ppm = 3.95 mg/m³	Gas	8.6 (340)		10.0 (395)	10.0 (395) 1 mg/m³ = 0.25 ppm		535 IIA T1
279	2-Methylbutane CAS 78-78-4 $CH_3CH(CH_3)C_2H_5$	 C_5H_{12}	i-Pentane Isopentane Ethyl dimethyl methane Isoamyl hydride	72.2 2.49 r 94 v	0.62	28 82 °F	761 1 ppm = 3.01 mg/m³	<-20 <-4 °F	1.3 (39)	1.3 (39)		1.4 (42) 1 mg/m³ = 0.33 ppm	1.3 (39)	420 IIA T2
280	3-Methylbutanoic acid CAS 503-74-2 $(CH_3)_2CHCH_2COOH$	3MBTA $C_5H_{10}O_2$	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 1 ppm = 4.25 mg/m³	78 172 °F	1.4 (60)					385 IIA T2
281	2-Methyl-1-butanol CAS 137-32-6 $C_2H_5CH(CH_3)CH_2OH$	 $C_5H_{12}O$	2-Methyl butyl alcohol i-Pentanol Isopentanol sec-Butyl carbinol	88.2 3.04 r	0.82	129 264 °F	3.3 1 ppm = 3.68 mg/m³	40 104 °F	1.2 (44)					340 IIA T2

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
272	50		IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 2100 ppm Gas-Library	
	(275)		IR	Polytron 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	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
273	200	200	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
	(618)	(618)	IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
274	5	10	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
	(18)	(36)	IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL // 6000 ppm Gas-Library	
			IR	Polytron 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	Polytron 5700 type 340	50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 OV1	as Aald x 2 (50 / 100 / 200 ppm x 2)	S = 0.15 (L)
275			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	Polytron 5700 type 340	100 %LEL (?)	
276	10	10	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
	(13)	(13)	IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
			EC	Polytron 7000 and P 8100 NH3 LC	MA: 100 ppm / LDL = 5 ppm	S = 0.7
			EC	Polytron 7000 and P 8100 NH3 TL	MA: 100 ppm / LDL = 1 ppm	S = 1.0*
			EC	Polytron 8100 NH3 FL	MA: 100 ppm / LDL = 1 ppm	S = 1.0* / Polytron 8100 only
277	20	100	IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
	(95)	(476)	IR	Polytron 5700 type 340	100 %LEL (?)	
278	1	20c	IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
	(4.0)	(79)	IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
279	1000	1000	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
	(3008)	(3008)	IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL // 1950 ppm Gas-Library	
			IR	Polytron 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	Polytron 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 = 1.02 (Propane = 1.00) / LEL = 1.3
280			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	30 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
281	20	100	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
	(74)	(368)	IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	

List of detectable gases and vapours 2018

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
282	Methyl-tert-butyl ether		tert-Butyl methyl ether	88.2	0.74	55	270	<-20	1.6	1.5		1.6	1.5	435
	CAS 1634-04-4	MTBE	2-Methoxy-2-methyl propane	3.04 r		131 °F		<-4 °F	(59)	(55)		(59)	(55)	IIA
	$CH_3OC(CH_3)_3$	$C_5H_{12}O$	2-Methyl-2-methoxy propane	119 v		1 ppm = 3.68 mg/m³				1 mg/m³ = 0.27 ppm				T2
283	Methyl-i-butylketone		4-Methyl-2-pentanone	100.2	0.80	116	19	14	1.2	1.2	1.2	1.2	1.2	475
	CAS 108-10-1	MiBK	i-Propyl acetone	3.46 r		241 °F		57 °F	(50)	(50)	(50)	(50)	(50)	IIA
	$(CH_3)_2CHCH_2COCH_3$	$C_6H_{12}O$	Isopropyl acetone	94 v		1 ppm = 4.18 mg/m³				1 mg/m³ = 0.24 ppm				T1
			Isobutyl methylketone											
			i-Butyl methylketone											
			Hexone											
			Methyl isobutyl ketone											
284	2-Methyl-3-butyn-2-ol		Dimethyl ethinyl carbinol	84.1	0.86	104	20	20	1.6					350
	CAS 115-19-5		Ethinyl dimethyl carbinol	2.90 r		219 °F		68 °F	(56)					IIB
	$CHCC(CH_3)_2OH$	C_5H_8O	3-Methyl butynol	98 v		1 ppm = 3.50 mg/m³				1 mg/m³ = 0.29 ppm				T2
285	Methyl chloride		Chloromethyl	50.5	Gas	-24	Gas	Gas	7.6	7.6	8.1	8.1	7.6	625
	CAS 74-87-3		Chloromethane	1.74 r		-11 °F			(160)	(160)	(170)	(170)	(160)	IIA
	CH_3Cl	CH_3Cl	Monochloromethane			1 ppm = 2.10 mg/m³				1 mg/m³ = 0.48 ppm				T1
			R40											
286	Methyl chloroformate		Chloroformic acid methyl ester	94.5	1.22	72	127	10	7.5	7.5			7.5	475
	CAS 79-22-1		Methoxycarbonyl chloride	3.26 r		162 °F		50 °F	(295)	(295)			(295)	IIA
	$ClCOOCH_3$	$C_2H_3ClO_2$	Methyl chloromethanoate	362 v		1 ppm = 3.94 mg/m³				1 mg/m³ = 0.25 ppm				T1
			Methyl chlorocarbonate											
287	Methylcyclohexane		Hexahydrotoluene	98.2	0.77	101	48	-4	1.1	1.0	1.2	1.2	1.15	260
	CAS 108-87-2	MCH	Cyclohexylmethane	3.39 r		214 °F		25 °F	(45)	(41)	(49)	(49)	(47)	IIA
	$(CH_2)_5CHCH_3$	C_7H_{14}	Toluene hexahydride	88 v		1 ppm = 4.09 mg/m³				1 mg/m³ = 0.24 ppm				T3
288	Methylcyclopentane		Methylpentamethylene	84.2	0.75	72	150	<-10		1.0		1.0	1.0	315
	CAS 96-37-7	MCP		2.91 r		162 °F		<14 °F		(35)		(35)	(35)	IIA
	$C_5H_9CH_3$	C_6H_{12}				1 ppm = 3.51 mg/m³				1 mg/m³ = 0.29 ppm				T2
289	Methyl ethyl carbonate		Carbonic acid ethyl methyl ester	104.1	1.01	107	10.7		2.0**					
	CAS 623-53-0	EMC	Ethyl methyl carbonate	3.59 r		225 °F			(87)					
	$(CH_3O)CO(OC_2H_5)$	$C_4H_8O_3$				1 ppm = 4.34 mg/m³				1 mg/m³ = 0.23 ppm				
290	Methylethyl ether		Ethylmethyl ether	60.1	Gas	7.4	Gas	Gas	2.0	2.0		2.0	2.0	190
	CAS 540-67-0		Methoxy ethane	2.07 r		45 °F			(50)	(50)		(50)	(50)	IIB
	$C_2H_5OCH_3$	C_3H_8O				1 ppm = 2.50 mg/m³				1 mg/m³ = 0.40 ppm				T4
291	2-Methyl-4-ethylhexane		4-Ethyl-2-methylhexane	128.3	0.72	134		21	0.7					280
	CAS 3074-75-7		i-Nonane	4.43 r		273 °F		70 °F	(37)					IIA
	$(CH_3)_2CHCH_2CH(C_2H_5)_2$	C_9H_{20}	Isononane	78 v		1 ppm = 5.35 mg/m³				1 mg/m³ = 0.19 ppm				T3
292	Methyl ethyl ketone		2-Butanone	72.1	0.80	80	105	-10	1.5	1.5	1.4	1.4	1.8	475
	CAS 78-93-3	MEK	Butan-2-one	2.49 r		176 °F		14 °F	(45)	(45)	(42)	(42)	(54)	IIB
	$CH_3COC_2H_5$	C_4H_8O	Methyl propanone	84 v		1 ppm = 3.00 mg/m³				1 mg/m³ = 0.33 ppm				T1
			Ethyl methyl ketone											
			Methyl acetone											

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
282	50		CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
	(184)		IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 2400 ppm Gas-Library	
			IR	Polytron 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	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
283	20	100	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
	(84)	(418)	IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL // 3000 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 1200 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
284	0.9		CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL (?)	
	(3.2)		IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
285	50	100	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	corrosive/sensor poison
	(105)	(210)	IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 15200 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 7600 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL (!)	
286	0.2		IR	PIR 7000 type 334, P 8700 type 334	10 / 100 %LEL // 7500 ppm Gas-Library	performance approved
	(0.79)		IR	Polytron 5700 type 334	20 + 50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 7500 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
287	200	500	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
	(818)	(2046)	IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL // 3000 ppm Gas-Library	
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL // 500 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
288	500		IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
	(1754)		IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
289			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	25 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
290			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
291			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
292	200	200	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD
	(601)	(601)	IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL // 4500 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	25 / 100 %LEL // 3000 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			OP	Polytron Pulsar 2	1 // 4 / 8 LELm	CSF = 0.51 (Propane = 1.00) / LEL = 1.5

List of detectable gases and vapours 2018

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
293	Methylethyl sulfide CAS 624-89-5 $CH_3SC_2H_5$	 C_3H_8S	Methylthioethane 2-Thiabutane	76.2 2.63 r 102 v	0.84	66 151 °F 1 ppm = 3.18 mg/m³	198	<-15 <5 °F	1.8 (57)	1 mg/m³ = 0.31 ppm				IIA
294	Methylfluoride CAS 593-53-3 CH_3F	 CH_3F	Fluoromethane R41	34.0 1.17 r	Gas	-78 -108 °F 1 ppm = 1.42 mg/m³	Gas	Gas	5.6* (79)	1 mg/m³ = 0.71 ppm				
295	Methyl formate CAS 107-31-3 $HCOOCH_3$	 $C_2H_4O_2$	Formic acid methyl ester Methyl methanoate Methanoic acid methyl ester R611	60.1 2.07 r 193 v	0.97	32 90 °F 1 ppm = 2.50 mg/m³	638	<-20 <-4 °F	5.0 (125)	5.0 (125)	4.5 (113)	4.5 (113)	5.0 (125)	450 IIA T2
296	2-Methylhexane CAS 591-76-4 $(CH_3)_2CHC_4H_9$	 C_7H_{16}	i-Heptane Isoheptane Dimethylbutylmethane	100.2 3.46 r 92 v	0.68	90 194 °F 1 ppm = 4.18 mg/m³		-10 14 °F	1.0 (42)	1 mg/m³ = 0.24 ppm		1.0 (42)		280 IIA T3
297	3-Methylhexane CAS 589-34-4 $C_2H_5CH(CH_3)C_3H_7$	 C_7H_{16}	i-Heptane Isoheptane	100.2 3.46 r	0.69	92 198 °F 1 ppm = 4.18 mg/m³		-11 12 °F		1 mg/m³ = 0.24 ppm				280 IIA T3
298	Methyl hydrazine CAS 60-34-4 $CH_3NH\text{-}NH_2$	 MMH CH_6N_2	Monomethylhydrazine	46.1 1.59 r 82 v	0.88	87 189 °F 1 ppm = 1.92 mg/m³	50	-8 18 °F	2.5 (48)	1 mg/m³ = 0.52 ppm	2.5 (48)	2.5 (48)		190 T4
299	Methyl iodide CAS 74-88-4 CH_3I	 MeI CH_3I	Iodomethane Halon 10001	141.9 4.90 r	2.28	42 108 °F 1 ppm = 5.91 mg/m³	441		8.5 (503)	1 mg/m³ = 0.17 ppm	n. a.			355 T2
300	Methyl mercaptan CAS 74-93-1 CH_3SH	 MeM CH_4S	Methanethiol Mercaptomethane Thiomethanol Methyl sulfhydrate	48.1 1.66 r	Gas	6 43 °F 1 ppm = 2.00 mg/m³	Gas	Gas	4.1 (82)	4.1 (82)	3.9 (78)	3.9 (78)	4.1 (82)	360 IIA T2
301	Methyl methacrylate CAS 80-62-6 $CH_2=C(CH_3)COOCH_3$	 MMA $C_5H_8O_2$	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 1 ppm = 4.17 mg/m³	40	10 50 °F	1.7 (71)	1.7 (71)	1.7 (71)	1.7 (71)	1.7 (71)	430 IIA T2
302	N-Methyl morpholine CAS 109-02-4 $(CH_2)_4ONCH_3$	 NMM $C_5H_{11}NO$	4-Methyl morpholine	101.2 3.49 r	0.91	116 241 °F 1 ppm = 4.22 mg/m³	30	13 55 °F	2.2* (93)	1 mg/m³ = 0.24 ppm				
303	2-Methyl pentane CAS 107-83-5 $CH_3CH(CH_3)C_3H_7$	 C_6H_{14}	Dimethylpropylmethane i-Hexane Isohexane	86.2 2.98 r 99 v	0.65	60 140 °F 1 ppm = 3.59 mg/m³	227	<-20 <-4 °F	1.2 (43)	1 mg/m³ = 0.28 ppm		1.2 (43)		300 IIA T3
304	3-Methyl pentane CAS 96-14-0 $CH_3CH_2CH(CH_3)CH_2CH_3$	 C_6H_{14}	i-Hexane Isohexane Diethylmethylmethane 1.2.3-Trimethylpropane	86.2 2.98 r 98 v	0.66	63 145 °F 1 ppm = 3.59 mg/m³	203	<-20 <-4 °F	1.2 (43)	1 mg/m³ = 0.28 ppm		1.2 (43)		300 IIA T3

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
293			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL ($)	
			IR	Polytron 5700 type 334	100 %LEL ($)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL ($)	
			IR	Polytron 5700 type 340	100 %LEL ($)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
294			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	Polytron 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
295	50	100	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
	(125)	(250)	IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
296	500	500	IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
	(2088)	(2088)	IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
297	500	500	IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
	(2088)	(2088)	IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
298			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			EC	Polytron 7000 and P 8100 Hydrazine	MMH: 1 / 1 / 5 ppm / LDL = 0.02 ppm	S = 0.6
299		5	EC	Polytron 7000 and P 8100 CO	CO: 50 / 300 / 1000 ppm	S approx. 1.0
		(30)				
300	0.5	10c	EC	Polytron 7000 and P 8100 H2S LC	MeM: 20 / 50 / 100 ppm / LDL = 1 ppm	S = 0.6
	(1.0)	(20)				
301	50	100	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD
	(209)	(417)	IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL // 4250 ppm Gas-Library	
			IR	Polytron 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	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 OV2	MMA: 20 / 50 / 100 ppm / LDL = 5 ppm	S = 0.5
302			IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
303	500		CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
	(1796)		IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
304	500		CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
	(1796)		IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	

List of detectable gases and vapours 2018

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
305	4-Methyl-2-pentanol		4-Methylpentan-2-ol	102.2	0.81	131	4.9	37	1.0	1.14	1.0	1.1	1.14	335
	CAS 108-11-2	MiBC	1.3-Dimethyl butanol	3.53 r		268 °F		99 °F	(43)	(49)	(43)	(47)	(49)	IIA
	$(CH_3)_2CHCH_2CH(OH)CH_3$	$C_6H_{14}O$	4-Methyl-2-amyl alcohol		1 ppm = 4.26 mg/m³					1 mg/m³ = 0.23 ppm				T2
			4-Methyl-2-pentyl alcohol											
			Methyl-i-butyl carbinol											
			Methyl isobutyl carbinol											
306	Methylpropionate		Propanoic acid methylester	88.1	0.91	80	84	-2	2.4			2.5		465
	CAS 554-12-1		Methylpropanoate	3.04 r		176 °F		28 °F	(88)			(92)		
	$C_2H_5COOCH_3$	$C_4H_8O_2$		145 v	1 ppm = 3.67 mg/m³					1 mg/m³ = 0.27 ppm				T1
307	Methylpropylether		1-Methoxypropane	74.1	0.73	39	507	<-20	1.7					
	CAS 557-17-5		Methyl-n-propylether	2.56 r		102 °F		<-4 °F	(52)					IIB
	$CH_3OC_3H_7$	$C_4H_{10}O$		108 v	1 ppm = 3.09 mg/m³					1 mg/m³ = 0.32 ppm				
308	Methyl propyl ketone		2-Pentanone	86.1	0.81	102	37	7	1.5		1.5	1.5		445
	CAS 107-87-9	MPK	Pentan-2-one	2.97 r		216 °F		45 °F	(54)		(54)	(54)		IIA
	$CH_3COC_3H_7$	$C_5H_{10}O$	Propyl methyl ketone	99 v	1 ppm = 3.59 mg/m³					1 mg/m³ = 0.28 ppm				T2
			1-Ethyl acetone											
309	Methyl-i-propyl ketone		3-Methyl-2-butanone	86.1	0.81	94	53	-1	1.4					475
	CAS 563-80-4	MIPK	3-Methyl butan-2-one	2.97 r		201 °F		30 °F	(50)					IIA
	$CH_3COCH(CH_3)_2$	$C_5H_{10}O$	1.1-Dimethyl acetone	93 v	1 ppm = 3.59 mg/m³					1 mg/m³ = 0.28 ppm				T1
			i-Propyl methylketone											
			Isopropyl methylketone											
			2-Acetyl propane											
310	2-Methylpyridine		Picoline	93.1	0.94	128	12	27	1.4	1.2			1.2	535
	CAS 109-06-8		2-Picoline	3.21 r		262 °F		81 °F	(54)	(47)			(47)	IIA
	$(C_5H_4N)CH_3$	C_6H_7N	o-Picoline	87 v	1 ppm = 3.88 mg/m³					1 mg/m³ = 0.26 ppm				T1
311	3-Methylpyridine		3-Picoline	93.1	0.96	144	6	36	1.3	1.4			1.4	537
	CAS 108-99-6		m-Picoline	3.21 r		291 °F		97 °F	(50)	(54)			(54)	IIA
	$(C_5H_4N)CH_3$	C_6H_7N			1 ppm = 3.88 mg/m³					1 mg/m³ = 0.26 ppm				T1
312	N-Methyl pyrrole		1-Methyl pyrrole	81.1	0.91	112	22	15						
	CAS 96-54-8		1-Methyl-1H-pyrrole	2.80 r		234 °F		59 °F						
	$C_4H_4NCH_3$	C_5H_7N			1 ppm = 3.38 mg/m³					1 mg/m³ = 0.30 ppm				
313	N-Methyl-2-pyrrolidone		1-Methyl-2-pyrrolidinone	99.1	1.03	203	0.3	86	1.5					265
	CAS 872-50-4	NMP	1-Methyl-2-pyrrolidone	3.42 r		397 °F		187 °F	(62)					IIA
	$(CH_2)_3CONCH_3$	C_5H_9NO	N-Methylpyrrolidone		1 ppm = 4.13 mg/m³					1 mg/m³ = 0.24 ppm				T3
314	Methylsilane		Silaethane	46.1	Gas	-58	Gas	Gas	1.3					160
	CAS 992-94-9	MMS	Monomethylsilane	1.59 r		-72 °F			(25)					
	SiH_3CH_3	CH_6Si			1 ppm = 1.92 mg/m³					1 mg/m³ = 0.52 ppm				T4
315	3-Methylstyrene		m-Methylstyrene	118.2	0.90	170	3.5	45	1.9*					490
	CAS 100-80-1		3-Vinyltoluene	4.08 r		338 °F		113 °F	(94)					
	$CH_3C_6H_4CH=CH_2$	C_9H_{10}	m-Vinyltoluene		1 ppm = 4.93 mg/m³					1 mg/m³ = 0.20 ppm				T1
			1-Methyl-3-vinylbenzene											
			1-Ethenyl-3-methylbenzene											
316	4-Methylstyrene		p-Methylstyrene	118.2	0.90	170	1.5	46	1.1*					490
	CAS 622-97-9		4-Vinyltoluene	4.08 r		338 °F		115 °F	(54)					
	$CH_3C_6H_4CH=CH_2$	C_9H_{10}	p-Vinyltoluene		1 ppm = 4.93 mg/m³					1 mg/m³ = 0.20 ppm				T1
			1-Methyl-4-vinylbenzene											
			1-Ethenyl-4-methylbenzene											
317	a-Methyl styrene		(1-Methyl ethenyl)benzene	118.2	0.91	166	3	40	0.9	0.8	1.9	1.9	0.9	445
	CAS 98-83-9	AMS	2-Phenyl propene	4.08 r		331 °F		104 °F	(44)	(39)	(94)	(94)	(44)	IIB
	$C_6H_5C(CH_3)=CH_2$	C_9H_{10}	i-Propenyl benzene		1 ppm = 4.93 mg/m³					1 mg/m³ = 0.20 ppm				T2
			Isopropenyl benzene											
			1-Methyl-1-phenylethylene											

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
305	20	25	IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
	(85)	(106)	IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
306			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 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	Polytron 5700 type 340	100 %LEL (?)	
308		200	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
		(718)	IR	PIR 7000 type 334, P 8700 type 334	100 %LEL ($)	
			IR	Polytron 5700 type 334	100 %LEL ($)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
309		200	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
		(718)	IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	Polytron 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
310			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
311			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	40 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
312			IR	PIR 7000 type 334, P 8700 type 334	50 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	25 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
313	20		IR	PIR 7000 type 340, P 8700 type 340	10 / 10 %LEL ($)	only for concentrations < 10 %LEL
	(83)					
314			EC	Polytron 7000 and P 8100 Hydrides	MMS: 5 / 20 / 20 ppm / LDL = 0.05 ppm	S = 0.55
			EC	Polytron 7000 and P 8100 Hydrides SC	MMS: 1 / 5 / 20 ppm / LDL = 0.05 ppm	S = 0.65
315	100	50	IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL (&)	
	(493)	(246)	IR	Polytron 5700 type 334	50 + 100 %LEL (&)	
			IR	PIR 7000 type 340, P 8700 type 340	50 / 100 %LEL (&)	
			IR	Polytron 5700 type 340	50 + 100 %LEL (&)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
316	100	50	IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL (&)	
	(493)	(246)	IR	Polytron 5700 type 334	50 + 100 %LEL (&)	
			IR	PIR 7000 type 340, P 8700 type 340	50 / 100 %LEL (&)	
			IR	Polytron 5700 type 340	50 + 100 %LEL (&)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
317	50	50	IR	PIR 7000 type 334, P 8700 type 334	40 / 100 %LEL // 3150 ppm Gas-Library	
	(246)	(246)	IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	45 / 100 %LEL // 3600 ppm Gas-Library	
			IR	Polytron 5700 type 340	100 %LEL Gas-Library	
			EC	Polytron 7000 and P 8100 OV1	as Aald (50 / 100 / 200 ppm)	S = 0.4 (L)

List of detectable gases and vapours 2018

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
318	2-Methyltetrahydrofuran CAS 96-47-9 $(CH_2)_3(O)CHCH_3$	2-MeTHF $C_5H_{10}O$	Tetrahydro-2-methylfuran Tetrahydrosilvan	86.1 2.97 r 76 v	0.85	80 176 °F 1 ppm = 3.59 mg/m³	136	-12 10 °F	1.2* (43)	1 mg/m³ = 0.28 ppm				
319	Methyltrimethoxysilane CAS 1185-55-3 $CH_3Si(OCH_3)_3$	MTMS $C_4H_{12}O_3Si$	Trimethoxymethylsilane	136.2 4.70 r	0.96	102 216 °F 1 ppm = 5.68 mg/m³	106		1.5* (85)	1 mg/m³ = 0.18 ppm				
320	Morpholine CAS 110-91-8 $(CH_2)_4ONH$	C_4H_9NO	Tetrahydro-1.4-oxazine Diethylene oximide	87.1 3.01 r	1.00	129 264 °F 1 ppm = 3.63 mg/m³	10.7	31 88 °F	1.8 (65)	1.4 (51)	1.4 (51)	1.4 (51)	1.8 (65)	275 IIA T3
321	Naphthalene CAS 91-20-3 $C_{10}H_8$	$C_{10}H_8$	Naphthyl hydride	128.2 4.43 r	1.14	218 424 °F 1 ppm = 5.34 mg/m³	0.07	77 171 °F	0.6 (32)		0.9 (48)	0.9 (48)	0.9 (48)	540 IIA T1
322	Nitric acid CAS 7697-37-2 HNO_3	HNO_3	Hydrogen nitrate	63.0 2.17 r	1.52	84 183 °F 1 ppm = 2.63 mg/m³	56	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
323	Nitroethane CAS 79-24-3 $CH_3CH_2NO_2$	$C_2H_5NO_2$		75.1 2.59 r	1.05	115 239 °F 1 ppm = 3.13 mg/m³	20.8	28 82 °F		3.4 (106)	3.4 (106)	3.4 (106)	3.4 (106)	410 IIB T2
324	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 1 ppm = 1.92 mg/m³	1000	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
325	Nitrogen monoxide CAS 10102-43-9 NO	NO	Nitric oxide	30.0 1.04 r	Gas	-152 -242 °F 1 ppm = 1.25 mg/m³	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
326	2-Nitropropane CAS 79-46-9 $(CH_3)_2CHNO_2$	2-NP $C_3H_7NO_2$	Nitro-i-propane Dimethylnitromethane	89.1 3.08 r 124 v	0.99	120 248 °F 1 ppm = 3.71 mg/m³	17	26 79 °F	2.2 (82)		2.6 (97)	2.6 (97)		425 IIB T2
327	n-Nonane CAS 111-84-2 C_9H_{20}	C_9H_{20}		128.3 4.43 r	0.72	151 304 °F 1 ppm = 5.35 mg/m³	4.8	31 88 °F	0.7 (37)	0.7 (37)	0.8 (43)	0.8 (43)	0.7 (37)	205 IIA T3
328	5-Nonanone CAS 502-56-7 $(C_4H_9)_2CO$	$C_9H_{18}O$	Nonan-5-on Dibutyl ketone Valerone	142.2 4.91 r	0.82	188 370 °F 1 ppm = 5.93 mg/m³	0.4	65 149 °F	0.8 (47)	1 mg/m³ = 0.17 ppm				330 T2
329	2.5-Norbornadiene CAS 121-46-0 $CH_2((CH=CH)CH)_2$	BCHD C_7H_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 1 ppm = 3.84 mg/m³	69	-11 12 °F	1.0 (38)	1 mg/m³ = 0.26 ppm				350 T2
330	1.7-Octadiene CAS 3710-30-3 $H_2C=CH(CH_2)_4CH=CH_2$	C_8H_{14}	Octa-1.7-diene	110.2 3.80 r 73 v	0.75	117 243 °F 1 ppm = 4.59 mg/m³	20		0.8 (37)	1 mg/m³ = 0.22 ppm				230 IIB T3

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
318			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
319			IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
320	10 (36)	20 (73)	IR	PIR 7000 type 334, P 8700 type 334	40 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 NH3 LC	as NH3 x 4 (50 / 100 ppm x 4)	S = 0.25 (L)
321	0.1 (0.53)	10 (53)	IR	PIR 7000 type 334, P 8700 type 334	55 / 100 %LEL	
			IR	Polytron 5700 type 334	100 %LEL	
322	1 (2.6)	2 (5.3)	EC	Polytron 7000 and P 8100 AC	Acid: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
323	100 (313)	100 (313)	IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	25 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
324	0.5 (0.96)	5c (9.6)	EC	Polytron 7000 and P 8100 NO2	NO2: 5 / 10 / 100 ppm / LDL = 0.3 ppm	
			EC	Polytron 7000 and P 8100 NO2 LC	NO2: 1 / 5 / 20 ppm / LDL = 0.05 ppm	
			EC	Polytron 5100 NO2	5 + 10 + 20 + 30 + 50 + 100 ppm	
			EC	Polytron 5100 NO2 LC	1 + 3 + 5 + 10 + 20 ppm	
			EC	Polytron 3000 NO2	10 ppm	
325	2 (2.5)	25 (31)	EC	Polytron 7000 and P 8100 NO	NO: 30 / 50 / 200 ppm / LDL = 3 ppm	
			EC	Polytron 5100 NO	30 + 50 + 100 + 200 ppm	
			EC	Polytron 3000 NO	50 ppm	
326	0.5T (1.9)	25 (93)	IR	PIR 7000 type 334, P 8700 type 334	100 %LEL ($)	
			IR	Polytron 5700 type 334	100 %LEL ($)	
327		200 (1069)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL // 1750 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL // 350 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL	performance approved
328			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
329			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	Polytron 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
330			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	

List of detectable gases and vapours 2018

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
331	Octamethyl cyclotetrasiloxane CAS 556-67-2 $(CH_3)_8Si_4O_4$	OMCTS $C_8H_{24}O_4Si_4$	DC244 Fluid	296.6 10.24 r	0.95 1 ppm = 12.36 mg/m³	175 347 °F	0.9	51 124 °F	0.75* (93)	1 mg/m³ = 0.08 ppm				400 IIB T2
332	Octamethyl trisiloxane CAS 107-51-7 $((CH_3)_3SiO)_2Si(CH_3)_2$	OMTSO $C_8H_{24}O_2Si_3$		236.5 8.16 r	0.82 1 ppm = 9.85 mg/m³	152 306 °F	5		0.9* (89)	1 mg/m³ = 0.10 ppm				
333	n-Octane CAS 111-65-9 C_8H_{18}	C_8H_{18}		114.2 3.94 r 81 v	0.70 1 ppm = 4.76 mg/m³	126 259 °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 $CH_2=CHC_6H_{13}$	C_8H_{16}	1-Octylene 1-Caprylene	112.2 3.87 r 69 v	0.71 1 ppm = 4.68 mg/m³	121 250 °F	23	21 70 °F	0.7 (33)	1 mg/m³ = 0.21 ppm				240 T3
335	Oxygen CAS 7782-44-7 O_2	O_2	R732	32.0 1.10 r	Gas 1 ppm = 1.33 mg/m³	-183 -297 °F	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 1 ppm = 2.00 mg/m³	-112 -170 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
337	Paraldehyde CAS 123-63-7 $(CH_3CHO)_3$	PCHO $C_6H_{12}O_3$	Paracetaldehyde 2.4.6-Trimethyl-1.3.5-trioxane p-Acetyldehyde	132.2 4.56 r 108 v	0.99 1 ppm = 5.51 mg/m³	124 255 °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_5H_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 1 ppm = 2.84 mg/m³	42 108 °F	452	<-30 <-22 °F	1.2 (34)	1 mg/m³ = 0.35 ppm			1.2 (34)	
339	1.1.1.3.3-Pentafluoro butane CAS 406-58-6 $CF_3CH_2CF_2CH_3$	$C_4H_5F_5$	HFC 365mfc R365	148.1 5.11 r 281 v	1.25 1 ppm = 6.17 mg/m³	40 104 °F	433	<-27 <-17 °F	3.8 (234)	1 mg/m³ = 0.16 ppm				590 T1
340	Pentafluoropropane CAS 460-73-1 $CF_3CH_2CHF_2$	$C_3H_3F_5$	1.1.1.3.3-Pentafluoropropane R245fa	134.1 4.63 r	Gas 1 ppm = 5.59 mg/m³	15.3 60 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
341	2.2.4.6.6-Pentamethylheptane CAS 13475-82-6 $((CH_3)_3CCH_2)_2CHCH_3$	iC12 $C_{12}H_{26}$	i-Dodecane Isododecane	170.3 5.88 r	0.75 1 ppm = 7.10 mg/m³	180 356 °F	1	43 109 °F	0.5 (35)	1 mg/m³ = 0.14 ppm				430 IIA T2
342	n-Pentane CAS 109-66-0 C_5H_{12}	C_5H_{12}	Amyl hydride	72.2 2.49 r 79 v	0.63 1 ppm = 3.01 mg/m³	36 97 °F	562	<-20 <-4 °F	1.1 (33)	1.1 (33)	1.5 (45)	1.5 (45)	1.4 (42)	260 IIA T3

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
331			IR	PIR 7000 type 334, P 8700 type 334	40 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	35 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
332			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
333	500	500	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD
	(2379)	(2379)	IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL // 2000 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL // 400 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL	performance approved
334			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
335			EC	Polytron 7000 and P 8100 O2	5 / 25 / 100 vol% / LDL = 0.5 vol%	
			EC	Polytron 7000 and P 8100 O2 LS	5 / 10 / 25 vol% / LDL = 0.5 vol%	
			EC	Polytron 5100 O2	5 + 10 + 20 + 25 + 50 + 100 vol%	
			EC	Polytron 5100 O2 LS	5 + 10 + 20 + 25 vol%	
			EC	Polytron 3000 O2	5 or 25 or 100 vol%	
			EC	Polytron 3000 O2 LS	25 vol%	
			EC	Polytron 2000 O2	25 vol%	
336		0.1	EC	Polytron 7000 and P 8100 Ozone	O3: 0.5 / 1 / 5 ppm / LDL = 0.02 ppm	
		(0.20)	EC	Polytron 3000 Ozone	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	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	25 / 100 %LEL	
			IR	Polytron 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	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	90 / 100 %LEL (&)	
			IR	Polytron 5700 type 340	100 %LEL (&)	
340			IR	PIR 7000 type 334, P 8700 type 334	1.7 / 3.0 vol%	
			IR	Polytron 5700 type 334	2.0 vol%	
			IR	PIR 7000 type 340, P 8700 type 340	2.4 / 3.0 vol%	
341			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL // 1250 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 500 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
342	1000	1000	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD
	(3008)	(3008)	IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL // 2750 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 700 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL	performance approved
			OP	Polytron Pulsar 2	1 // 4 / 8 LELm	CSF = 0.79 (Propane = 1.00) / LEL = 1.1

List of detectable gases and vapours 2018

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	Pentanoic acid		Valeric acid	102.1	0.94	186	0.2	87	1.6			1.6		375
	CAS 109-52-4		Butyl carbonic acid	3.52 r		367 °F		189 °F	(68)			(68)		IIA
	$CH_3(CH_2)_3COOH$	$C_5H_{10}O_2$			1 ppm = 4.25 mg/m³					1 mg/m³ = 0.24 ppm				T2
344	3-Pentanol		Pentan-3-ol	88.2	0.82	116	7.6	30	1.2			1.2		360
	CAS 584-02-1		3-Amyl alcohol	3.04 r		241 °F		86 °F	(44)			(44)		IIA
	$C_2H_5CH(OH)C_2H_5$	$C_5H_{12}O$	Diethyl carbinol		1 ppm = 3.68 mg/m³					1 mg/m³ = 0.27 ppm				T2
			1-Ethyl-1-propanol											
345	1-Pentene		n-Amylene	70.1	0.64	30	704	<-20	1.4			1.5		280
	CAS 109-67-1		n-Pentylene	2.42 r		86 °F		<-4 °F	(41)			(44)		
	$C_3H_7CH=CH_2$	C_5H_{10}	Propylethylene	96 v	1 ppm = 2.92 mg/m³					1 mg/m³ = 0.34 ppm				T3
346	Phosgene		Carbonyl chloride	98.9	Gas	8	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
	CAS 75-44-5	CG	Carbon oxychloride	3.41 r		46 °F								
	$COCl_2$	CCl_2O	Chloroformyl chloride		1 ppm = 4.12 mg/m³					1 mg/m³ = 0.24 ppm				
347	Phosphine		Hydrogen phosphide	34.0	Gas	-88	Gas		1.6			1.6		
	CAS 7803-51-2		Phosphorus hydride	1.17 r		-126 °F			(23)			(23)		
	PH_3	H_3P	Phosphorus trihydride		1 ppm = 1.42 mg/m³					1 mg/m³ = 0.71 ppm				
348	Phosphorus oxychloride		Phosphorus chloride	153.3	1.68	105	36	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
	CAS 10025-87-3	POCL	Phosphorus oxytrichloride	5.29 r		221 °F								
	$POCl_3$	Cl_3OP	Phosphoryl chloride		1 ppm = 6.39 mg/m³					1 mg/m³ = 0.16 ppm				
			Trichlorophosphorus oxide											
			Trichlorophosphine oxide											
349	Phosphorus trichloride		Phosphorus chloride	137.3	1.57	76	127	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
	CAS 7719-12-2		Trichlorophosphine	4.74 r		169 °F								
	PCl_3	Cl_3P			1 ppm = 5.72 mg/m³					1 mg/m³ = 0.17 ppm				
350	a-Pinene		2.6.6-Trimethylbicyclo(3.1.1)hept-2-ene	136.2	0.86	155	5	33	0.8*					255
	CAS 80-56-8		2-Pinene	4.70 r		311 °F		91 °F	(45)					
	$C_{10}H_{16}$	$C_{10}H_{16}$			1 ppm = 5.68 mg/m³					1 mg/m³ = 0.18 ppm				T3
351	Piperidine		Hexahydropyridine	85.2	0.86	106	33	4	1.3					
	CAS 110-89-4	PIP	Pentamethylene imine	2.94 r		223 °F		39 °F	(46)					IIA
	$(CH_2)_5NH$	$C_5H_{11}N$	Azacyclohexane	80 v	1 ppm = 3.55 mg/m³					1 mg/m³ = 0.28 ppm				
352	Propane		Dimethyl methane	44.1	Gas	-42	Gas	Gas	1.7	1.7	2.1	2.1	1.7	470
	CAS 74-98-6		Propyl hydride	1.52 r		-44 °F			(31)	(31)	(39)	(39)	(31)	IIA
	C_3H_8	C_3H_8	R290		1 ppm = 1.84 mg/m³					1 mg/m³ = 0.54 ppm				T1
353	i-Propanol		Isopropanol	60.1	0.78	82	43	12	2.0	2.0	2.0	2.0	2.0	425
	CAS 67-63-0	IPA	i-Propyl alcohol	2.07 r		180 °F		54 °F	(50)	(50)	(50)	(50)	(50)	IIA
	$(CH_3)_2CHOH$	C_3H_8O	Isopropyl alcohol	96 v	1 ppm = 2.50 mg/m³					1 mg/m³ = 0.40 ppm				T2
			2-Propanol											
			Propan-2-ol											
			Dimethyl carbinol											

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
343			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
344	20		CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
	(74)		IR	PIR 7000 type 340, P 8700 type 340	100 %LEL ($)	
			IR	Polytron 5700 type 340	100 %LEL ($)	
345			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	Polytron 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	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (!)	
346	0.1	0.1	EC	Polytron 7000 and P 8100 COCl2	Phsg: 0.1 / 1 / 20 ppm / LDL = 0.05 ppm	
	(0.41)	(0.41)	EC	Polytron 5100 COCl2	0.1 + 0.3 + 0.5 + 1 + 3 + 5 + 10 + 20 ppm	
347	0.1	0.3	EC	Polytron 7000 and P 8100 PH3/AsH3	PH3: 0.3 / 1 / 20 ppm / LDL = 0.02 ppm	S = 1.0
	(0.14)	(0.43)	EC	Polytron 7000 and P 8100 Hydrides	PH3: 0.3 / 1 / 20 ppm / LDL = 0.03 ppm	S = 1.0
			EC	Polytron 7000 and P 8100 Hydrides SC	PH3: 0.3 / 1 / 1 ppm / LDL = 0.01 ppm	S = 1.0
			EC	Polytron 5100 Hydrides	PH3: 0.3 + 0.5 + 1 + 3 + 5 + 10 + 20 ppm	
			EC	Polytron 3000 PH3	0.3 or 1 or 10 ppm	
348	0.02	0.1	EC	Polytron 7000 and P 8100 AC	POC: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
	(0.13)	(0.64)	EC	Polytron 7000 and P 8100 HCl	POC: 20 / 30 / 100 ppm / LDL = 1.5 ppm	S = 0.9
349	0.1	0.5	EC	Polytron 7000 and P 8100 AC	PCl3: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
	(0.57)	(2.9)	EC	Polytron 7000 and P 8100 HCl	PCl3: 5 / 10 / 20 ppm / LDL = 0.2 ppm	S = 3.0
350			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
351			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
352	1000	1000	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD
	(1837)	(1837)	IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 3400 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL // 850 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL	performance approved
			IR	GasSecure GS01	100 %LEL	min. conc. for ultrasonic sensor: 1700 ppm
			OP	Polytron Pulsar 2	1 // 4 / 8 LELm	CSF = 1.00 (Propane = 1.00) / LEL = 1.7
353	200	400	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD
	(501)	(1002)	IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 4000 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 2000 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL	performance approved
			EC	Polytron 7000 and P 8100 OV1	IPA: 100 / 200 / 300 ppm / LDL = 10 ppm	S = 0.3

List of detectable gases and vapours 2018

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	n-Propanol		n-Propyl alcohol	60.1	0.80	97	20	22	2.1	2.1	2.2	2.2	2.2	385
	CAS 71-23-8	NPA	1-Propanol	2.07 r		207 °F		72 °F	(53)	(53)	(55)	(55)	(55)	IIB
	C_3H_7OH	C_3H_8O	Ethyl carbinol	98 v		1 ppm = 2.50 mg/m³					1 mg/m³ = 0.40 ppm			T2
355	Propargyl alcohol		2-Propyn-1-ol	56.1	0.95	115	10	33	2.8	2.4			2.4	365
	CAS 107-19-7		Prop-2-yn-1-ol	1.94 r		239 °F		91 °F	(65)	(56)			(56)	IIB
	$HCCCH_2OH$	C_3H_4O	Ethynyl carbinol			1 ppm = 2.34 mg/m³					1 mg/m³ = 0.43 ppm			T2
			2-Propynyl alcohol											
356	i-Propenyl acetate		1-Methylvinyl acetate	100.1	0.91	97	23	4	1.6					395
	CAS 108-22-5		1-Propen-2-ol acetate	3.46 r		207 °F		39 °F	(67)					IIA
	$CH_3COOC(CH_3)=CH_2$	$C_5H_8O_2$	Acetic acid i-propenyl ester	110 v		1 ppm = 4.17 mg/m³					1 mg/m³ = 0.24 ppm			T2
			Isopropenyl acetate											
357	Propionaldehyde		Propionic aldehyde	58.1	0.80	49	341	<-20	2.3	2.0		2.6	2.0	190
	CAS 123-38-6		Propanal	2.01 r		120 °F		<-4 °F	(56)	(48)		(63)	(48)	IIB
	C_2H_5CHO	C_3H_6O	Propyl aldehyde	104 v		1 ppm = 2.42 mg/m³					1 mg/m³ = 0.41 ppm			T4
			Methylacetaldehyde											
358	Propionic acid		Propanoic acid	74.1	0.99	141	3.5	52	2.9	2.1		2.9	3.1	485
	CAS 79-09-4		Methylacetic acid	2.56 r		286 °F		126 °F	(90)	(65)		(90)	(96)	IIA
	C_2H_5COOH	$C_3H_6O_2$	Carboxyethane			1 ppm = 3.09 mg/m³					1 mg/m³ = 0.32 ppm			T1
			Ethylformic acid											
			Ethanecarboxylic acid											
359	Propionic acid anhydride		Propionic anhyride	130.1	1.02	167	1.4	74				1.3		315
	CAS 123-62-6		Propanoic acid anhydride	4.49 r		333 °F		165 °F				(70)		
	$(C_2H_5CO)_2O$	$C_6H_{10}O_3$	Propanoic anhydride			1 ppm = 5.42 mg/m³					1 mg/m³ = 0.18 ppm			T2
			Methylacetic anhydride											
360	2-Propoxyethanol		Ethylene glycol monopropyl ether	104.2	0.91	150	1.7	51	1.45					230
	CAS 2807-30-9	EGnPE	Propylglycol	3.60 r		302 °F		124 °F	(63)					IIB
	$C_3H_7OCH_2CH_2OH$	$C_5H_{12}O_2$	Propyl cellosolve			1 ppm = 4.34 mg/m³					1 mg/m³ = 0.23 ppm			T3
361	i-Propoxyethanol		Ethylene glycol i-propyl ether	104.2	0.90	142	3.5	43	1.4					
	CAS 109-59-1	EGiPE	i-Propyl glycol	3.60 r		288 °F		109 °F	(61)					IIB
	$(CH_3)_2CHOC_2H_4OH$	$C_5H_{12}O_2$	Isopropoxyethanol			1 ppm = 4.34 mg/m³					1 mg/m³ = 0.23 ppm			
			Isopropyl glycol											
			Isopropyl oxitol											
			4-Methyl-3-oxa-1-pentanol											
362	1-Propoxy-2-propanol		1-Propoxypropan-2-ol	118.2	0.89	150	2.27	48	1.2					
	CAS 1569-01-3	PnPGE	Propylene glycol propyl ether	4.08 r		302 °F		118 °F	(59)					
	$C_3H_7OCH_2CH(OH)CH_3$	$C_6H_{14}O_2$	2-Propoxy-1-methyl ethanol			1 ppm = 4.93 mg/m³					1 mg/m³ = 0.20 ppm			
363	i-Propyl acetate		Isopropyl acetate	102.1	0.88	89	62	2	1.8	1.7	1.8	1.8	1.8	425
	CAS 108-21-4		Acetic acid i-propyl ester	3.52 r		192 °F		36 °F	(77)	(72)	(77)	(77)	(77)	IIA
	$CH_3COOCH(CH_3)_2$	$C_5H_{10}O_2$	Acetic acid 1-methylethyl ester	130 v		1 ppm = 4.25 mg/m³					1 mg/m³ = 0.24 ppm			T2
			2-Acetoxypropane											
			2-Propyl acetate											
364	n-Propyl acetate		Acetic acid propyl ester	102.1	0.89	102	33	10	1.7	1.7	1.7	1.7	1.7	455
	CAS 109-60-4		Ethanoic acid propyl ester	3.52 r		216 °F		50 °F	(72)	(72)	(72)	(72)	(72)	IIA
	$CH_3COOC_3H_7$	$C_5H_{10}O_2$	1-Acetoxypropane	122 v		1 ppm = 4.25 mg/m³					1 mg/m³ = 0.24 ppm			T1

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
354		200	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
		(501)	IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL // 3150 ppm Gas-Library	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL // 1050 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 OV1	as EtOH (100 / 200 / 300 ppm)	S = 0.85 (L)
355	2	1	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL (?)	
	(4.7)	(2.3)				
356	10		IR	PIR 7000 type 334, P 8700 type 334	50 / 100 %LEL	
	(42)		IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	45 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
357			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL // 6900 ppm Gas-Library	
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL // 3450 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
358	10	10	IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL	
	(31)	(31)	IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL ($)	
359			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	35 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
360	20		IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
	(87)		IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
361	5		IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
	(22)		IR	Polytron 5700 type 340	100 %LEL (?)	
362			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
363		250	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
		(1064)	IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
364		200	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
		(851)	IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	

List of detectable gases and vapours 2018

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
365	i-Propylamine CAS 75-31-0 $(CH_3)_2CHNH_2$	 C_3H_9N	2-Aminopropane 2-Propylamine 2-Propanamine Isopropylamine	59.1 2.04 r 107 v	0.69	32 90 °F 1 ppm = 2.46 mg/m³	633	<-20 <-4 °F	2.0 (49)	2.3 (57)	 1 mg/m³ = 0.41 ppm	2.3 (57)	2.3 (57)	400 IIA T2
366	n-Propylamine CAS 107-10-8 $C_3H_7NH_2$	 C_3H_9N	1-Aminopropane 1-Propylamine 1-Propanamine	59.1 2.04 r 102 v	0.72	49 120 °F 1 ppm = 2.46 mg/m³	339	<-20 <-4 °F	2.0 (49)	2.0 (49)	 1 mg/m³ = 0.41 ppm	2.0 (49)	2.0 (49)	320 IIA T2
367	n-Propylbenzene CAS 103-65-1 $C_6H_5C_3H_7$	 C_9H_{12}	1-Phenylpropane	120.2 4.15 r	0.86	159 318 °F 1 ppm = 5.01 mg/m³	3.5	39 102 °F	0.8 (40)	 	 1 mg/m³ = 0.20 ppm	0.8 (40)	 	450 IIA T2
368	i-Propyl chloride CAS 75-29-6 $(CH_3)_2CHCl$	 IPC C_3H_7Cl	2-Chloropropane Isopropyl chloride	78.5 2.71 r 159 v	0.86	35 95 °F 1 ppm = 3.27 mg/m³	567	<-20 <-4 °F	2.8 (92)	2.8 (92)	 1 mg/m³ = 0.31 ppm	2.8 (92)	2.8 (92)	590 IIA T1
369	n-Propylchloride CAS 540-54-5 C_3H_7Cl	 C_3H_7Cl	1-Chloropropane R280	78.5 2.71 r 143 v	0.89	47 117 °F 1 ppm = 3.27 mg/m³	373	<-20 <-4 °F	2.6 (85)	2.4 (79)	 1 mg/m³ = 0.31 ppm	2.6 (85)	2.4 (79)	520 IIA T1
370	i-Propylcyclohexane CAS 696-29-7 $C_6H_{11}CH(CH_3)_2$	 C_9H_{18}	Isopropylcyclohexane 2-Cyclohexylpropane (Methylethyl)cyclohexane Hexahydrocumene	126.4 4.36 r	0.80	155 311 °F 1 ppm = 5.27 mg/m³					 1 mg/m³ = 0.19 ppm			
371	Propylene CAS 115-07-1 $CH_2=CHCH_3$	 C_3H_6	Propene Methylethylene Methylethene R1270	42.1 1.45 r	Gas	-48 -54 °F 1 ppm = 1.75 mg/m³	Gas	Gas	2.0 (35)	2.0 (35)	 1 mg/m³ = 0.57 ppm	2.0 (35)	2.0 (35)	485 IIA T1
372	1.2-Propylenediamine CAS 78-90-0 $CH_3CH(NH_2)CH_2NH_2$	 PDA $C_3H_{10}N_2$	1.2-Diaminopropane Propane-1.2-diamine	74.1 2.56 r	0.87	119 246 °F 1 ppm = 3.09 mg/m³	4	33 91 °F	2.2* (68)	 	 1 mg/m³ = 0.32 ppm	 	 	
373	Propylene oxide CAS 75-56-9 CH_3CHCH_2O	 PO C_3H_6O	1.2-Epoxy propane 1.2-Propene oxide Methyloxirane Methyl ethylene oxide	58.1 2.01 r 83 v	0.83	34 93 °F 1 ppm = 2.42 mg/m³	588	<-20 <-4 °F	1.9 (46)	1.9 (46)	2.3 (56) 1 mg/m³ = 0.41 ppm	2.3 (56)	1.9 (46)	430 IIB T2
374	n-Propylformate CAS 110-74-7 $HCOOC_3H_7$	 $C_4H_8O_2$	Formic acid propylester Methanoic acid propylester	88.1 3.04 r 133 v	0.91	81 178 °F 1 ppm = 3.67 mg/m³	84	-3 27 °F	2.2 (81)	 	 1 mg/m³ = 0.27 ppm	 	 	360 IIA T2
375	i-Propyl mercaptan CAS 75-33-2 $(CH_3)_2CHSH$	 iPM C_3H_8S	2-Propanethiol 2-Propyl mercaptan Isopropyl mercaptan	76.2 2.63 r 104 v	0.82	53 127 °F 1 ppm = 3.18 mg/m³	300	-20 -4 °F	1.8 (57)	 	 1 mg/m³ = 0.31 ppm	 	 	

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
365	5	5	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
	(12)	(12)	IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 NH3 LC	i-PA: 100 / 200 ppm / LDL = 10 ppm	
366			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	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
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 // 2000 ppm Gas-Library	
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL // 1200 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
368			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	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 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 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
370			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
371			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 4000 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL // 3000 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL	performance approved
			IR	GasSecure GS01	100 %LEL	min. conc. for ultrasonic sensor: 2000 ppm
			EC	Polytron 7000 and P 8100 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	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
373	2	100	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD
	(4.8)	(242)	IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL // 2850 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL // 2850 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 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 P 8100 H2S LC	iPM: 20 / 50 / 100 ppm / LDL = 1 ppm	S = 0.5

List of detectable gases and vapours 2018

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
376	n-Propyl mercaptan		1-Propanethiol	76.2	0.84	68	165	-15	1.8					
	CAS 107-03-9	nPM	1-Propyl mercaptan	2.63 r		154 °F		5 °F	(57)					IIA
	C_3H_7SH	C_3H_8S	1-Mercaptopropane	102 v	1 ppm = 3.18 mg/m³					1 mg/m³ = 0.31 ppm				
377	i-Propyl nitrate		Nitric acid i-propylester	105.1	1.04	101	36	11		2.0			2.0	175
	CAS 1712-64-7		Nitric acid 1-methylethylester	3.63 r		214 °F		52 °F		(88)			(88)	IIB
	$(CH_3)_2CHONO_2$	$C_3H_7NO_3$	Isopropyl nitrate		1 ppm = 4.38 mg/m³					1 mg/m³ = 0.23 ppm				T4
378	Propyne		Methyl acetylene	40.1	Gas	-23	Gas		1.8	1.7	1.7	1.7	1.7	340
	CAS 74-99-7		Allylene	1.38 r		-9 °F			(30)	(28)	(28)	(28)	(28)	IIB
	CH_3CCH	C_3H_4	1-Propyne		1 ppm = 1.67 mg/m³					1 mg/m³ = 0.60 ppm				T2
			Propine											
379	Pyridine		Azine	79.1	0.98	115	20	17	1.7	1.7	1.8	1.8	1.7	550
	CAS 110-86-1		Azabenzene	2.73 r		239 °F		63 °F	(56)	(56)	(59)	(59)	(56)	IIA
	C_5H_5N	C_5H_5N		86 v	1 ppm = 3.30 mg/m³					1 mg/m³ = 0.30 ppm				T1
380	Silane		Monosilane	32.1	Gas	-112	Gas					1.4		
	CAS 7803-62-5		Silicon tetrahydride	1.11 r		-170 °F						(19)		
	SiH_4	H_4Si	Silicane		1 ppm = 1.34 mg/m³					1 mg/m³ = 0.75 ppm				
			Silicon hydride											
381	Silicon tetrachloride		Tetrachlorosilane	169.9	1.48	57	260	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
	CAS 10026-04-7			5.86 r		135 °F								
	$SiCl_4$	Cl_4Si			1 ppm = 7.08 mg/m³					1 mg/m³ = 0.14 ppm				
382	Silicon tetrafluoride		Tetrafluorosilane	104.1	Gas	-65	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
	CAS 7783-61-1			3.59 r		-85 °F								
	SiF_4	F_4Si			1 ppm = 4.34 mg/m³					1 mg/m³ = 0.23 ppm				
383	Styrene		Styrol	104.2	0.91	145	7	32	1.0	1.0	0.9	0.9	1.1	490
	CAS 100-42-5		Vinyl benzene	3.60 r		293 °F		90 °F	(43)	(43)	(39)	(39)	(48)	IIA
	$C_6H_5CH=CH_2$	C_8H_8	Ethenyl benzene		1 ppm = 4.34 mg/m³					1 mg/m³ = 0.23 ppm				T1
			Phenylethylene											
			Cinnamene											
384	Sulfur dioxide		Sulfurous oxide	64.1	Gas	-10	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
	CAS 7446-09-5		R764	2.21 r		14 °F								
	SO_2	O_2S			1 ppm = 2.67 mg/m³					1 mg/m³ = 0.37 ppm				
385	Terpineol		2(4-Methylcyclohex-3-ene-1-yl)propan-2-(	154.3	0.93	215	0.24		0.53*					
	CAS 8000-41-7		4-Menth-1-ene-8-ol	5.33 r		419 °F			(34)					
	$(CH_3)_2C(OH)C_6H_8CH_3$	$C_{10}H_{18}O$	1-Methyl-4-isopropyl-1-cyclohexene-8-ol		1 ppm = 6.43 mg/m³					1 mg/m³ = 0.16 ppm				
386	Tetraethyl orthosilicate		Tetraethoxysilane	208.3	0.93	169	9.2	37	0.8	0.45		1.3		230
	CAS 78-10-4	TEOS	Silicic acid tetraethylester	7.19 r		336 °F		99 °F	(69)	(39)		(113)		IIB
	$(C_2H_5O)_4Si$	$C_8H_{20}O_4Si$	Tetraethyl silicate		1 ppm = 8.68 mg/m³					1 mg/m³ = 0.12 ppm				T3
			Ethyl silicate											
			Ethyl orthosilicate											
387	1.1.1.2-Tetrafluoro ethane		Norflurane	102.0	Gas	-26	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
	CAS 811-97-2		R134a	3.52 r		-15 °F								
	CF_3CH_2F	$C_2H_2F_4$			1 ppm = 4.25 mg/m³					1 mg/m³ = 0.24 ppm				
388	1.3.3.3-Tetrafluoroprop-1-ene trans		HFO-1234ze	114.0	Gas	-19	Gas		6.2*					
	CAS 1645-83-6		HFC-1234ze	3.94 r		-2 °F			(295)					
	$CF_3CH=CHF$	$C_3H_2F_4$	R1234ze		1 ppm = 4.75 mg/m³					1 mg/m³ = 0.21 ppm				
389	Tetrahydro benzaldehyde		1.2.3.6-Tetrahydrobenzaldehyde	110.2	0.97	164	2.1	47	1.1*					
	CAS 100-50-5	THB	3-Cyclohexene-1-aldehyde	3.80 r		327 °F		117 °F	(51)					
	C_6H_9CHO	$C_7H_{10}O$	3-Cyclohexene-1-carbaldehyde		1 ppm = 4.59 mg/m³					1 mg/m³ = 0.22 ppm				
			4-Formyl-1-cyclohexene											
390	Tetrahydrofuran		Diethylene monoxide	72.1	0.89	64	173	-20	1.5	1.5	2.0	2.0	1.5	230
	CAS 109-99-9	THF	Tetramethylene oxide	2.49 r		147 °F		-4 °F	(45)	(45)	(60)	(60)	(45)	IIB
	$(CH_2)_4O$	C_4H_8O	1.4-Epoxybutane	76 v	1 ppm = 3.00 mg/m³					1 mg/m³ = 0.33 ppm				T3

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
376		0.5c (1.6)	EC	Polytron 7000 and P 8100 H2S LC	nPM: 20 / 50 / 100 ppm / LDL = 1 ppm	S = 0.3
377			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 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	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
380		5 (6.7)	EC	Polytron 7000 and P 8100 Hydrides	SiH4: 5 / 5 / 50 ppm / LDL = 0.05 ppm	S = 0.95
			EC	Polytron 7000 and P 8100 Hydrides SC	SiH4: 1 / 5 / 20 ppm / LDL = 0.05 ppm	S = 0.65
			EC	Polytron 3000 PH3	0.3 or 1 or 10 ppm	
381			EC	Polytron 7000 and P 8100 AC	TeCS: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
			EC	Polytron 7000 and P 8100 HCl	TeCS: 5 / 10 / 20 ppm / LDL = 0.2 ppm	S = 5.0
			EC	Polytron 3000 AC	3 or 10 ppm	
382			EC	Polytron 7000 and P 8100 AC	SiF4: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
			EC	Polytron 3000 AC	3 or 10 ppm	
383	20 (87)	100 (434)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	polymerizing/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	40 / 100 %LEL // 3500 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 OV2	Styr: 20 / 50 / 100 ppm / LDL = 5 ppm	S = 0.5
384	1 (2.7)	5 (13)	EC	Polytron 7000 and P 8100 SO2	SO2: 5 / 10 / 100 ppm / LDL = 0.5 ppm	
			EC	Polytron 5100 SO2	5 + 10 + 20 + 30 + 50 + 100 ppm	
			EC	Polytron 3000 SO2	10 ppm	
385			IR	PIR 7000 type 334, P 8700 type 334	70 / 100 %LEL	
			IR	Polytron 5700 type 334	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
386	1.4 (12)	100 (868)	IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
387	1000 (4250)		IR	PIR 7000 type 334, P 8700 type 334	1.5 / 10.0 vol% // 15000 ppm Gas-Library	
			IR	Polytron 5700 type 334	2.0 + 5.0 + 10.0 vol% Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	2.0 / 10.0 vol% // 20000 ppm Gas-Library	
			IR	Polytron 5700 type 340	2.0 + 5.0 + 10.0 vol% Gas-Library	
388			IR	PIR 7000 type 334, P 8700 type 334	100 / 100 %LEL (&)	
			IR	Polytron 5700 type 334	100 %LEL (&)	
389			IR	PIR 7000 type 334, P 8700 type 334	60 / 100 %LEL	
			IR	Polytron 5700 type 334	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	25 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
390	50 (150)	200 (601)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL // 2250 ppm Gas-Library	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL // 750 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 OV1	THF: 30 / 50 / 200 ppm / LDL = 5 ppm	S = 0.75

List of detectable gases and vapours 2018

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
391	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 1 ppm = 5.51 mg/m³	208 406 °F	0.24	71 160 °F	0.8 (44)	1 mg/m³ = 0.18 ppm		0.8 (44)		390 T2
392	Tetrahydropyran CAS 142-68-7 $(CH_2)_5O$	THP $C_5H_{10}O$	Tetrahydro-2H-pyran Pentamethylene oxide Oxacyclohexane Oxane	86.1 2.97 r	0.88 1 ppm = 3.59 mg/m³	88 190 °F	95.3	-20 -4 °F	1.1* (39)	1 mg/m³ = 0.28 ppm				
393	Tetrahydrothiophene CAS 110-01-0 C_4H_8S	THT C_4H_8S	Tetramethylene sulfide Thiocyclopentane Thiophane	88.2 3.04 r 61 v	1.00 1 ppm = 3.68 mg/m³	121 250 °F	19	13 55 °F	1.1 (40)	1.1 (40)	1 mg/m³ = 0.27 ppm		1.1 (40)	200 IIA T4
394	Tetrakisdimethylaminotitanium CAS 3275-24-9 $((CH_3)_2N)_4Ti$	TDMAT $C_8H_{24}N_4Ti$	Titanium tetrakis(dimethylammonium) Titanium dimethylamide	224.2 7.74 r	0.95 1 ppm = 9.34 mg/m³	n. a. 32 °F	0.1		0.15* (14)	1 mg/m³ = 0.11 ppm				
395	1.2.3.5-Tetramethylbenzene CAS 527-53-7 $C_6H_2(CH_3)_4$	TeMB $C_{10}H_{14}$	1.3.4.5-Tetramethylbenzene Isodurene	134.2 4.63 r	0.89 1 ppm = 5.59 mg/m³	198 388 °F			0.7** (39)	1 mg/m³ = 0.18 ppm				
396	1.1.3.3-Tetramethyldisiloxane CAS 3277-26-7 $(CH_3SiHCH_3)_2O$	TMDSO $C_4H_{14}OSi_2$	2.4-Dimethyl-3-oxa-2.4-disilapentane	134.3 4.64 r	0.76 1 ppm = 5.60 mg/m³	71 160 °F	150	<-20 <-4 °F	0.8* (45)	1 mg/m³ = 0.18 ppm				240 IIB T3
397	Tetramethyldivinyl disilazane CAS 7691-02-3 $(CH_2=CH\text{-}Si(CH_3)_2)_2NH$	DVTMDS $C_8H_{19}NSi_2$	1.1.3.3-Tetralmethyl-1.3-divinyldisilazane 1.3-Divinyltetramethyldisilazane 1.3-Divinyl-1.1.3.3-tetramethyldisilazane	185.4 6.40 r	0.82 1 ppm = 7.73 mg/m³	160 320 °F	14		0.8* (62)	1 mg/m³ = 0.13 ppm				
398	Tetramethyl ethylene diamine CAS 110-18-9 $(CH_3)_2NC_2H_4N(CH_3)_2$	TEMED $C_6H_{16}N_2$	1.2-Bis-(dimethyl amino)-ethane	116.2 4.01 r 94 v	0.77 1 ppm = 4.84 mg/m³	120 248 °F	13.3	19 66 °F	1.0 (48)	1 mg/m³ = 0.21 ppm				145 IIA T4
399	Tetramethyl orthosilicate CAS 681-84-5 $(CH_3O)_4Si$	TMOS $C_4H_{12}O_4Si$	Tetramethoxy silane Silicic acid tetramethylester Tetramethyl silicate Methyl silicate Methyl orthosilicate	152.2 5.25 r	1.02 1 ppm = 6.34 mg/m³	122 252 °F	18	20 68 °F	0.88* (56)	1 mg/m³ = 0.16 ppm				
400	2.2.3.3-Tetramethylpentane CAS 7154-79-2 $C_2H_5C(CH_3)_2C(CH_3)_3$	C_9H_{20}	i-Nonane Isononane	128.3 4.43 r 84 v	0.76 1 ppm = 5.35 mg/m³	140 284 °F		25 77 °F	0.8 (43)	1 mg/m³ = 0.19 ppm				430 IIA T2
401	Tetramethylsilane CAS 75-76-3 $(CH_3)_4Si$	TMS $C_4H_{12}Si$	Tetramethyl silicane	88.2 3.04 r 85 v	0.65 1 ppm = 3.68 mg/m³	26 79 °F	750	<-20 <-4 °F	1.0 (37)	1 mg/m³ = 0.27 ppm				330 IIB T2
402	Thionyl chloride CAS 7719-09-7 $SOCl_2$	Cl_2OS	Sulfurous oxychloride Sulfurous dichloride	119.0 4.11 r	1.64 1 ppm = 4.96 mg/m³	76 169 °F	124	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
403	Tin tetrachloride CAS 7646-78-8 $SnCl_4$	Cl_4Sn	Tin chloride Stannic chloride	260.5 8.99 r	2.23 1 ppm = 10.85 mg/m³	114 237 °F	24	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
404	Titanium tetrachloride CAS 7550-45-0 $TiCl_4$	Cl_4Ti	Titanic chloride	189.7 6.55 r	1.73 1 ppm = 7.90 mg/m³	136 277 °F	13	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
405	Toluene CAS 108-88-3 $C_6H_5CH_3$	C_7H_8	Toluol Methyl benzene Methyl benzol Phenyl methane	92.1 3.18 r 66 v	0.87 1 ppm = 3.84 mg/m³	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

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
391			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
392			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
393	50 (184)		IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 H2S LC	THT: 20 / 50 / 100 ppm / LDL = 1 ppm	S = 0.3
394			EC	Polytron 7000 and P 8100 NH3 LC	TDMATI: 100 ppm / LDL = 5 ppm	
395			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
396			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
			EC	Polytron 7000 and P 8100 OV1	as IPA (100 / 200 / 300 ppm)	S = 0.4 (L)
397			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	25 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
398			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
399	0.3 (1.9)	1 (6.3)	IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
400			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
401			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
402		1c (5.0)	EC	Polytron 7000 and P 8100 AC	Acid: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
			EC	Polytron 7000 and P 8100 HCl	SOC: 5 / 10 / 20 ppm / LDL = 0.2 ppm	S = 4.0
403			EC	Polytron 7000 and P 8100 AC	Acid: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
			EC	Polytron 7000 and P 8100 HCl	TTC: 5 / 10 / 20 ppm / LDL = 0.5 ppm	S = 3.0
404			EC	Polytron 7000 and P 8100 AC	Acid: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
			EC	Polytron 7000 and P 8100 HCl	TiTC: 5 / 10 / 20 ppm / LDL = 0.2 ppm	S = 5.0
405	50 (192)	200 (768)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD
			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL // 2750 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	40 / 100 %LEL // 4000 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL	performance approved

List of detectable gases and vapours 2018

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
406	Tributylamine		N.N-Dibutyl-1-butanamine	185.4	0.78	214	0.4	86	1.4*					
	CAS 102-82-9	TBA		6.40 r		417 °F		187 °F	(108)					IIA
	$(C_4H_9)_3N$	$C_{12}H_{27}N$			1 ppm = 7.73 mg/m³					1 mg/m³ = 0.13 ppm				
407	1.1.1-Trichloroethane		Methyl chloroform	133.4	1.34	74	133	n. a.	9.5		7.5	7.5		490
	CAS 71-55-6		R140a	4.60 r		165 °F			(528)		(417)	(417)		IIA
	CH_3CCl_3	$C_2H_3Cl_3$		590 v	1 ppm = 5.56 mg/m³					1 mg/m³ = 0.18 ppm				T1
408	Trichloro ethene		Trichloro ethylene	131.4	1.46	87	77.6		7.9		8.0			410
	CAS 79-01-6	TCE	1.1.2-Trichloroethylene	4.54 r		189 °F			(433)		(438)			IIA
	$Cl_2C=CHCl$	C_2HCl_3	Ethylene trichloride	444 v	1 ppm = 5.48 mg/m³					1 mg/m³ = 0.18 ppm				T2
409	1.2.3-Trichloropropane		Trichlorohydrin	147.4	1.39	156	2.8	74	3.2		3.2	3.2		
	CAS 96-18-4		Allyl trichloride	5.09 r		313 °F		165 °F	(197)		(197)	(197)		IIA
	$C_3H_5Cl_3$	$C_3H_5Cl_3$	Glyceryl trichlorohydrin		1 ppm = 6.14 mg/m³					1 mg/m³ = 0.16 ppm				
410	Trichlorosilane		Silyltrichloride	135.5	1.34	32	660	<-20	6.9			1.2		195
	CAS 10025-78-2	TCS	Silicochloroform	4.68 r		90 °F		<-4 °F	(390)			(68)		IIC
	$SiHCl_3$	HCl_3Si	Silicon chloroform	435 v	1 ppm = 5.65 mg/m³					1 mg/m³ = 0.18 ppm				T4
411	Triethoxymethane		Triethyl orthoformate	148.2	0.90	146	4	30	0.7					
	CAS 122-51-0	TEOF	Formic acid-o-triethyl ester	5.12 r		295 °F		86 °F	(43)					
	$CH(OC_2H_5)_3$	$C_7H_{16}O_3$		72 v	1 ppm = 6.18 mg/m³					1 mg/m³ = 0.16 ppm				
412	Triethylamine		N.N-Diethylethanamine	101.2	0.73	89	70	-7	1.2	1.2	1.2	1.2	1.2	215
	CAS 121-44-8	TEA		3.49 r		192 °F		19 °F	(51)	(51)	(51)	(51)	(51)	IIA
	$(C_2H_5)_3N$	$C_6H_{15}N$		104 v	1 ppm = 4.22 mg/m³					1 mg/m³ = 0.24 ppm				T3
413	1.1.1-Trifluoroethane		Methylfluoroform	84.0	Gas	-48	Gas	Gas		6.8			9.2	714
	CAS 420-46-2		R143a	2.90 r		-54 °F				(238)			(322)	IIA
	CF_3CH_3	$C_2H_3F_3$			1 ppm = 3.50 mg/m³					1 mg/m³ = 0.29 ppm				T1
414	Trifluoro methoxy benzene		Trifluoroanisene	162.1	1.23	102			2.0*					
	CAS 456-55-3	TFMB	Phenyl trifluoromethyl ether	5.60 r		216 °F			(135)					
	$C_6H_5OCF_3$	$C_7H_5F_3O$			1 ppm = 6.75 mg/m³					1 mg/m³ = 0.15 ppm				
415	Trimethoxymethane		Trimethyl orthoformate	106.1	0.97	104	31.3	13	1.4*					255
	CAS 149-73-5	TMOF	Formic acid-o-trimethyl ester	3.66 r		219 °F		55 °F	(62)					IIB
	$CH(OCH_3)_3$	$C_4H_{10}O_3$			1 ppm = 4.42 mg/m³					1 mg/m³ = 0.23 ppm				T3
416	Trimethoxysilane		Trimethoxy silylhydride	122.2	0.96	81	9.6		1.0*					
	CAS 2487-90-3	TMOS		4.22 r		178 °F			(51)					
	$(CH_3O)_3SiH$	$C_3H_{10}O_3Si$			1 ppm = 5.09 mg/m³					1 mg/m³ = 0.20 ppm				
417	Trimethyl-o-acetate		1.1.1-Trimethoxyethane	120.2	0.96	108	20		1.5*					
	CAS 1445-45-0	TMOA	Trimethoxyethane	4.15 r		226 °F			(75)					
	$CH_3C(OCH_3)_3$	$C_5H_{12}O_3$	Acetic acid-o-trimethyl ester Trimethyl orthoacetate		1 ppm = 5.01 mg/m³					1 mg/m³ = 0.20 ppm				
418	Trimethylamine		N.N-Dimethylmethanamine	59.1	Gas	3	Gas	Gas	2.0	2.0	2.0	2.0	2.0	190
	CAS 75-50-3	TMA		2.04 r		37 °F			(49)	(49)	(49)	(49)	(49)	IIA
	$(CH_3)_3N$	C_3H_9N			1 ppm = 2.46 mg/m³					1 mg/m³ = 0.41 ppm				T4

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
406			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
407	200	350	IR	PIR 7000 type 334, P 8700 type 334	100 %LEL ($)	
	(1112)	(1945)	IR	Polytron 5700 type 334	100 %LEL ($)	
408	11T	25	IR	PIR 7000 type 334, P 8700 type 334	65 / 100 %LEL	
	(60)	(137)	IR	Polytron 5700 type 334	100 % LEL	
409		10	IR	PIR 7000 type 334, P 8700 type 334	80 / 100 %LEL (&)	
		(61)	IR	Polytron 5700 type 334	100 %LEL (&)	
			IR	PIR 7000 type 340, P 8700 type 340	65 / 100 %LEL	
			IR	Polytron 5700 type 340	100 %LEL	
410			EC	Polytron 7000 and P 8100 AC	Acid: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
			EC	Polytron 7000 and P 8100 HCl	TrCS: 5 / 10 / 20 ppm / LDL = 0.5 ppm	S = 3.0
411			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
412	1	25	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
	(4.2)	(105)	IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 NH3 LC	TEA: 100 ppm / LDL = 5 ppm	S = 0.5
			EC	Polytron 7000 and P 8100 NH3 TL	TEA: 100 ppm / LDL = 2 ppm	S = 0.55*
			EC	Polytron 8100 NH3 FL	TEA: 100 ppm / LDL = 2 ppm	S = 0.55* / Polytron 8100 only
413			IR	PIR 7000 type 334, P 8700 type 334	50 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
414			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL ($)	
			IR	Polytron 5700 type 334	100 %LEL ($)	
415			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
416			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
417			IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
418		10	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
		(25)	IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 NH3 LC	TMA: 100 ppm / LDL = 5 ppm	S = 0.5
			EC	Polytron 7000 and P 8100 NH3 TL	TMA: 100 ppm / LDL = 2 ppm	S = 0.55*
			EC	Polytron 8100 NH3 FL	TMA: 100 ppm / LDL = 2 ppm	S = 0.55* / Polytron 8100 only

List of detectable gases and vapours 2018

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
419	1.2.4-Trimethylbenzene CAS 95-63-6 $C_6H_3(CH_3)_3$	 C_9H_{12}	Pseudocumene	120.2 4.15 r	0.88 1 ppm = 5.01 mg/m³	169 336 °F	2.1	50 122 °F	0.8 (40)		0.9 (45) 1 mg/m³ = 0.20 ppm	0.9 (45)		485 IIA T1
420	1.3.5-Trimethylbenzene CAS 108-67-8 $C_6H_3(CH_3)_3$	 C_9H_{12}	Mesitylene	120.2 4.15 r	0.87 1 ppm = 5.01 mg/m³	165 329 °F	2.7	44 111 °F	1.0 (50)	0.8 (40) 1 mg/m³ = 0.20 ppm			0.8 (40)	550 IIA T1
421	Trimethyl borane CAS 593-90-8 $B(CH_3)_3$	 TMB C_3H_9B	Boron trimethyl	55.9 1.93 r	Gas 1 ppm = 2.33 mg/m³	-20 -4 °F	Gas	Gas			1 mg/m³ = 0.43 ppm			
422	2.2.4-Trimethyl hexane CAS 16747-26-5 $C_2H_5CH(CH_3)CH_2C(CH_3)_3$	 C_9H_{20}	i-Nonane Isononane	128.3 4.43 r 79 v	0.71 1 ppm = 5.35 mg/m³	126 259 °F	16	15 59 °F	0.7 (37)		1 mg/m³ = 0.19 ppm			IIA
423	2.2.4-Trimethylpentane CAS 540-84-1 $CH_3CH(CH_3)CH_2C(CH_3)_3$	 C_8H_{18}	i-Octane Isooctane	114.2 3.94 r 103 v	0.69 1 ppm = 4.76 mg/m³	99 210 °F	53	-12 10 °F	1.0 (48)	0.7 (33) 1 mg/m³ = 0.21 ppm		1.1 (52)	1.0 (48)	410 IIA T2
424	2.4.4-Trimethyl-1-pentene CAS 107-39-1 $CH_2=C(CH_3)CH_2C(CH_3)_3$	 C_8H_{16}	a-Diisobutylene Di-i-butylene	112.2 3.87 r 78 v	0.72 1 ppm = 4.68 mg/m³	101 214 °F	46	-6 21 °F	0.8 (37)		1 mg/m³ = 0.21 ppm	0.8 (37)		415 IIA T2
425	Trimethyl silane CAS 993-07-7 $SiH(CH_3)_3$	 TMS $C_3H_{10}Si$	2-Methyl-2-silapropane	74.2 2.56 r	Gas 1 ppm = 3.09 mg/m³	7 45 °F	Gas	Gas	1.3 (40)		1 mg/m³ = 0.32 ppm			235 T3
426	Trimethylsilanol CAS 1066-40-6 $(CH_3)_3SiOH$	 TMS $C_3H_{10}OSi$	Hydroxytrimethylsilane Trimethylhydroxysilane	90.2 3.11 r	0.81 1 ppm = 3.76 mg/m³	98 208 °F	16	16 61 °F	1.4 (53)		1 mg/m³ = 0.27 ppm			380 T2
427	1.3.5-Trioxane CAS 110-88-3 $(CH_2)_3O_3$	 $C_3H_6O_3$	Trioxymethylene 1.3.5-Trioxacyclohexane Metaformaldehyde	90.1 3.11 r	1.17 1 ppm = 3.75 mg/m³	115 239 °F	11	45 113 °F	3.6 (135)	3.2 (120) 1 mg/m³ = 0.27 ppm		3.6 (135)	3.2 (120)	410 IIB T2
428	Tri-n-propylamine CAS 102-69-2 $(C_3H_7)_3N$	 $C_9H_{21}N$	N.N-Dipropyl-1-propanamine Tripropyl amine	143.3 4.95 r	0.75 1 ppm = 5.97 mg/m³	156 313 °F	3.5	35 95 °F	0.7 (42)		1 mg/m³ = 0.17 ppm	0.7 (42)		180 T4
429	Tungsten hexafluoride CAS 7783-82-6 WF_6	 F_6W		297.8 10.28 r	Gas 1 ppm = 12.41 mg/m³	17 63 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
430	n-Undecane CAS 1120-21-4 $C_{11}H_{24}$	 C11 $C_{11}H_{24}$	Hendecane	156.3 5.40 r	0.74 1 ppm = 6.51 mg/m³	196 385 °F	0.5	61 142 °F	0.6 (39)		1 mg/m³ = 0.15 ppm			195 IIA T4
431	Vinyl acetate CAS 108-05-4 $CH_3COOCH=CH_2$	 VAM $C_4H_6O_2$	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 1 ppm = 3.59 mg/m³	72 162 °F	120	-8 18 °F	2.6 (93)	2.6 (93) 1 mg/m³ = 0.28 ppm	2.6 (93)	2.6 (93)	2.6 (93)	385 IIA T2

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
419	20	25	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
	(100)	(125)	IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	25 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
420	20	25	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
	(100)	(125)	IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL // 2000 ppm Gas-Library	
			IR	Polytron 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	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
421			EC	Polytron 7000 and P 8100 Hydrides		on request
422			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	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 560 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
423			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	performance approved
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 700 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
424			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 OV1	as EtOH (100 / 200 / 300 ppm)	S = 0.6 (L)
425		5	EC	Polytron 7000 and P 8100 Hydrides	TMS: 5 / 20 / 20 ppm / LDL = 0.3 ppm	S = 0.11
		(15)	EC	Polytron 7000 and P 8100 Hydrides SC	TMS: 1 / 5 / 20 ppm / LDL = 0.2 ppm	S = 0.15
426			IR	PIR 7000 type 334, P 8700 type 334	40 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	25 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
427			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	solid - melting point 62 °C
428			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
429			EC	Polytron 7000 and P 8100 AC	WF6: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
430			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
431	5	4c	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	polymerizing/sensor poison
	(18)	(14)	IR	PIR 7000 type 334, P 8700 type 334	60 / 100 %LEL	
			IR	Polytron 5700 type 334	100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 OV1	VAc: 20 / 50 / 100 ppm / LDL = 5 ppm	S = 0.8

List of detectable gases and vapours 2018

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
432	Vinylacetylene		Butenyne	52.1	Gas	5	Gas	Gas	2.0			2.1		
	CAS 689-97-4		Butenine	1.80 r		41 °F			(43)			(46)		
	CH_2=CHCCH	C_4H_4	1-Buten-3-yne		1 ppm = 2.17 mg/m³					1 mg/m³ = 0.46 ppm				
			3-Butenyne-1											
433	Vinyl chloride		Chloroethene	62.5	Gas	-13	Gas	Gas	3.8	3.6	3.6	3.6	3.6	415
	CAS 75-01-4	VCM	Chloroethylene	2.16 r		9 °F			(99)	(94)	(94)	(94)	(94)	IIA
	CH_2=CHCl	C_2H_3Cl	R1140		1 ppm = 2.60 mg/m³					1 mg/m³ = 0.38 ppm				T2
434	Vinylcyclohexane		Ethenylcyclohexane	110.2	0.81	128			0.9**					
	CAS 695-12-5		Cyclohexylethylene	3.80 r		262 °F			(41)					
	$C_6H_{11}CH$=CH_2	C_8H_{14}	Cyclohexylethene		1 ppm = 4.59 mg/m³					1 mg/m³ = 0.22 ppm				
			Hexahydrostyrene											
435	4-Vinylcyclohexene		1.2.5.6-Tetrahydrostyrene	108.2	0.83	128	14	15	0.6	0.8		1.0	0.8	265
	CAS 100-40-3	VCH	4-Ethenyl-1-cyclohexene	3.73 r		262 °F		59 °F	(27)	(36)		(45)	(36)	IIA
	C_6H_9CH=CH_2	C_8H_{12}	Cyclohexenylethylene	49 v	1 ppm = 4.51 mg/m³					1 mg/m³ = 0.22 ppm				T3
436	Vinyl fluoride		Fluoroethene	46.0	Gas	-72	Gas	Gas	2.9			2.6		375
	CAS 75-02-5	VF	Fluoroethylene	1.59 r		-98 °F			(56)			(50)		
	CH_2=CHF	C_2H_3F	R1141		1 ppm = 1.92 mg/m³					1 mg/m³ = 0.52 ppm				T2
437	Vinylmethyl ether		Methoxyethene	58.1	Gas	6	Gas	Gas	2.2			2.6		220
	CAS 107-25-5	VME	Ethenyl methylether	2.01 r		43 °F			(53)			(63)		IIB
	CH_2=CHOCH$_3$	C_3H_6O	Methylvinyl ether		1 ppm = 2.42 mg/m³					1 mg/m³ = 0.41 ppm				T3
438	Vinylmethylketone		Methylvinylketone	70.1	0.83	81	100	-7				2.1		
	CAS 78-94-4	MVK	1-Buten-3-one	2.42 r		178 °F		19 °F				(61)		
	CH_3COCH=CH_2	C_4H_6O	Methylene acetone		1 ppm = 2.92 mg/m³					1 mg/m³ = 0.34 ppm				
439	2-Vinylpyridine		2-Ethenylpyridine	105.1	0.97	159	2.5	35		1.2			1.2	482
	CAS 100-69-6	2VP	2-Pyridylethylene	3.63 r		318 °F		95 °F		(53)			(53)	IIA
	$C_5H_4N(CH$=$CH_2)$	C_7H_7N	2-Pyridylethene		1 ppm = 4.38 mg/m³					1 mg/m³ = 0.23 ppm				T1
440	Vinyltrimethoxysilane		Ethenyltrimethoxysilane	148.2	0.97	124		23	0.7					235
	CAS 2768-02-7	VTMOS	Trimethoxy vinylsilane	5.12 r		255 °F		73 °F	(43)					IIB
	CH_2=$CHSi(OCH_3)_3$	$C_5H_{12}O_3Si$	Trimethoxy silylethene	67 v	1 ppm = 6.18 mg/m³					1 mg/m³ = 0.16 ppm				T3
441	m-Xylene		1.3-Dimethylbenzene	106.2	0.86	139	8.3	25	1.0	1.0	1.1	1.1		540
	CAS 108-38-3		m-Xylol	3.67 r		282 °F		77 °F	(44)	(44)	(49)	(49)		IIA
	$C_6H_4(CH_3)_2$	C_8H_{10}		77 v	1 ppm = 4.43 mg/m³					1 mg/m³ = 0.23 ppm				T1
442	o-Xylene		1.2-Dimethylbenzene	106.2	0.88	144	6.7	30	1.0	1.0	0.9	0.9	1.0	465
	CAS 95-47-6		o-Xylol	3.67 r		291 °F		86 °F	(44)	(44)	(40)	(40)	(44)	IIA
	$C_6H_4(CH_3)_2$	C_8H_{10}		75 v	1 ppm = 4.43 mg/m³					1 mg/m³ = 0.23 ppm				T1
443	p-Xylene		1.4-Dimethylbenzene	106.2	0.86	138	8.9	25	1.0	0.9	1.1	1.1		540
	CAS 106-42-3		p-Xylol	3.67 r		280 °F		77 °F	(44)	(40)	(49)	(49)		IIA
	$C_6H_4(CH_3)_2$	C_8H_{10}		77 v	1 ppm = 4.43 mg/m³					1 mg/m³ = 0.23 ppm				T1

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
432			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL (?)	polymerizing/sensor poison
433		1 (2.6)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	corrosive/sensor poison
			EC	Polytron 7000 and P 8100 OV1	VC: 20 / 50 / 100 ppm / LDL = 5 ppm	S = 0.8
434			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
435			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
			EC	Polytron 7000 and P 8100 OV1	as EtOH (100 / 200 / 300 ppm)	S = 0.5 (L)
436		1 (1.9)	EC	Polytron 7000 and P 8100 OV1	as VC (20 / 50 / 100 ppm)	S = 0.8 (L)
437	50 (121)		IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
438			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
439			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
440			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
441	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	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	30 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
442	100 (443)	100 (443)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD
			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL // 2500 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	30 / 100 %LEL // 2500 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
443	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	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	30 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	

Notes

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