



 **RSG**®

***FILTER SELECTION GUIDE***

This document will help when choosing filtering respiratory protection devices and to ensure that are best informed to protect yourself against harmful substances in the air by choosing the most suitable mask and filter.

**1. What factors should I consider when choosing a respirator?**

The hazards in your environment must be known, as well as the work requirements. You must take into consideration the protection level required by your respirator - as well as the type and protection level of the filter.

**2. Always check the following before using respiratory protection:**

- Is there enough oxygen in the ambient air?
- What contaminants are in the ambient air?
- What are the concentrations of the contaminants?
- Are the contaminants in gas, particle, or vapour form?
- Do the contaminants have adequate warning indicators, such as smell or taste?
- What are the applicable Occupational Exposure Limits(OEL)?
- Is other personal protection equipment required?

**3. Which respirator should I choose?**

It is necessary to answer all of the above questions to determine the needed protection factor. Table 1 gives you a brief overview of the nominal protection factors (NFP) for respiratory protective devices. The NFP is the highest permissible leakage level according to the approval requirements of the respective device. It indicates the mathematically calculated maximum protection performance.

To evaluate the minimum required protection factor—you will need to know the concentration of the hazardous substance you are dealing with as well as the assigned Occupational Exposure Limit (OEL) of the substance.

An OEL is the concentration of a specific airborne substance - averaged over a reference period, which shows no evidence to be threatening to one's health if exposed to it at that concentration on a regular basis.

**LIST OF RESPIRATORY PROTECTIVE DEVICES**

Device	Marking	Nominal protection factor
<b>Particle Filtering Devices</b>		
Disposable facemask	FFP1	4
	FFP2	12
	FFP3	50
Half mask with filter	P1	4
	P2	12
	P3	48
Full face mask with filter	P1	5
	P2	16
	P3	1000
PAPR with helmet or hood	TH1P	10
	TH2P	50
	TH3P	500
PAPR with full face mask	TM1P	20
	TM2P	200
	TM3P	2000

**Gas Filtering Devices**

Half mask with filter	50
Full face mask with filter	2000

**Example: Determining the needed protection factor of your respirator**

Contaminant:	Lead dust (particle protection is needed)
Concentration at the workplace:	3mg/m <sup>3</sup>
OEL(Occupational Exposure Limit):	0.1mg/m <sup>3</sup>
Minimum protection factor =	
concentration of hazardous substance	3
OEL	0.1
$\frac{3}{0.1} = 30$	

You can see in Table 1 that with a needed minimum protection factor of 30 for lead dust, you will need to use a P3 filter or together with a half mask, a full face mask, or PAPR. In the case where the contaminants are present in both particle and gas form, the nominal protection factor must be established for each one separately.

For the selection of filtering devices, the higher protection factor must be applied. The concentration of gases is measured in ppm (parts per million = volume of the substance within 1m<sup>3</sup> of air) or mg/m<sup>3</sup> (= weight of the substance within 1m<sup>3</sup> of air) and the concentration of particles (dust) only in mg/m<sup>3</sup>. While mg/m<sup>3</sup> deals with weight and ppm with volume, there is no direct calculation for mg/m<sup>3</sup> to ppm. Higher concentrations are often indicated in % by volume, 10,000 ppm = 1vol.%

#### 4. What is the maximum concentration of the contaminant for which I can use respiratory protection?

You can determine the maximum permissible concentration by multiplying the nominal protection factor (as found in table 1) by the Occupational Exposure Limit (OEL).

Maximum permissible concentration  
= nominal protection factor x OEL

#### Example: Determining the maximum permissible concentration 2)

Contaminant:	Chlorinedioxide
OEL:	0.1ppm (Occupational Exposure Limit)
Respirator:	Full face mask with combination filter B-P2

Nominal protection factor x OEL  
= Maximum permissible concentration

Nominal protection factor of full face mask with gas filter: 2000  
2000 x 0.1 = 200 ppm Chlorine dioxide

Nominal protection factor of full face mask with particle filter P2:16  
16x0.1 = 1.6ppm Chlorine dioxide

When using a combination filter, which is the case in the above illustration, both of the maximum permissible concentrations need to be calculated, i.e. the value for the gas filter and the value for the particle filter. The lower of the two values should be taken as the maximum permissible concentration for this combination filter. For the example above therefore, the maximum permissible concentration for chlorine dioxide when using a full face mask with a B-P2 combination filter is 1.6ppm of Chlorine Dioxide.











## 5. How to select the right filter?

Contaminants come in different forms - generally: aerosols (solids / particles) and gases (gases, vapours). You can choose between the filter types to protect against one of these forms or a combination of both of them.

Solids / particles:	Dusts, fibres, fumes, micro-organisms (e.g. viruses, bacteria, fungi, spores) and mists
Gaseous substances:	Gases and vapours

The following table shows you the color coding of filters according to EN14387 which helps you to determine which filter type is needed for the contaminants you are dealing with.

### COLOUR CODING FOR FILTERS

Colour code	Filter type	Contaminants present
	AX	Gases and vapours of organic compounds with boiling point $\leq 65^{\circ}\text{C}$
	A	Gases and vapours of organic compounds with boiling point $> 65^{\circ}\text{C}$
	B	In-organic gases and vapours, e.g. chlorine, hydrogen sulphide, hydrogen cyanide
	E	Sulphur dioxide, hydrogen chloride
	K	Ammonia and organic Ammonia derivatives
	CO	Carbon monoxide
	Hg	Mercury vapour
	NO	Nitrous gases including nitrogen monoxide
	Reactor	Radioactive iodine including radioactive methyl iodide
	P	Particles

## Differentiation of filter types

Filters are split in different classes according to their capacity (gas filters) or their efficiency (particle filters), see table 3. Gas filters of class 2 may be used at higher concentrations or for a longer time than class 1 filters. The class of a particle filter indicates how efficient the filter is in filtering out particles. (class 1:80%, class 2:94%, class 3:99.95%).

### DIFFERENTIATION OF FILTER TYPES

Filter type	Filter class	Protection against	Maximum permissible concentration of toxic substance
<b>Gas filter</b>		<b>Gases and vapours</b>	
		Capacity:	50 times the OEL with half masks / 2000 times the OEL with full face masks, but maximal:
	1	Small	0.1vol.%(1000ppm)
	2	Medium	0.5vol.%(5000ppm)
	3	Large	1.0vol.%(10000ppm)
<b>Particle filter</b>		<b>Particles</b>	
		Efficiency (separation ability):	
	1	Small	4 times the OEL with half masks / 5 times the OEL with full face masks 9)
	2	Medium	12 times the OEL with half masks / 16 times the OEL with full face masks 9)
	3	Large	48 times the OEL with half masks / 1000 times the OEL with full face masks 9)
<b>Combined filter</b>		<b>Gases, vapours and particles</b>	
	1 - P2	Appropriate combination of gas and particle filters	Appropriate combined levels
	2 - P2		
	1 - P3		
	2 - P3		

### Example Filter Types:

A2B2-P3



**A filter with the above mentioned colour code is suitable for the following contaminants:**

- A.** gases and vapours of organic compounds with a boiling point beyond 65°C up to concentrations covered by filter class 2 and
- B.** inorganic gases and vapours, e.g. chlorine, hydrogen sulphide, hydrogen cyanide, up to concentrations covered by filter class 2 and
- P.** particles up to concentrations covered by filter class 3.

**When using filtering respiratory protection, always keep the following in mind**

Never use any kind of filtering respiratory protection device:

- in oxygen deficient atmospheres (see local legislation for further guidelines e.g. Germany less than 17 vol.% O<sup>2</sup>)
- in poorly ventilated areas or confined spaces, such as tanks, small rooms, tunnels, or vessels
- in atmospheres where the concentrations of the toxic contaminants are unknown
- when the concentration of a contaminant is higher than the maximum permissible concentration and / or the filter class capacity
- when the contaminant has poor or no warning properties (smell, taste or irritation), such as aniline, benzene, carbon monoxide, and ozone

Immediately leave the area if:

- breathing resistance increases noticeably
- you began to feel dizzy
- you smell, taste, or become irritated by the contaminant
- your respirator is damaged

Make sure that:

- the selected respirator fits properly
- if both gases and particles are present, that you use a combination filter, to filter out both gases and particles

## How long does a filter last?

The service life of a respiratory filter depends on its size and on the conditions of use.

Factors affecting service life:

- concentration of the contaminants
- combination of the contaminants
- air humidity
- temperature
- duration of use
- breathing rate of the user

Since the service life is influenced by many factors, it is not possible to give an estimated service life.













Important is:

- local / company regulations



























The end of service life is generally recognizable by:














- in gas filters by a noticeable taste or smell of the contaminant
- in particle filters by an increased breathing resistance
- in combination filters a noticeable taste or smell and / or an increased breathing resistance

## EXAMPLES OF CONTAMINANTS, THEIR OELS AND FILTER RECOMMENDATIONS
















Contaminants	OEL		Filter type	Colour code
	ppm	mg/m <sup>3</sup>		
Acetaldehyde	50	91	AX (P3)	
Acetamide	–	–	A-P3	
Acetic Acid	10	25	B [E] (P2)	
Acetic anhydride	5	21	A (P2)	
Acetone	500	1200	AX (P3)	
Acetoncyanohydrine	–	–	A (P2)	
Acetonitrile	20	34	A (P3)	
Acetyl chloride	–	–	B-P2	
Acrolein	0.1	0.25	AX (P3)	
Acrylamide	–	–	A-P3	
Acrylic acid	10	30	A (P2)	
Acrylnitrile	carcinogen (cat. 2)		A (P3)	

































































Contaminants	OEL		Filter type	Colour code
	ppm	mg/m <sup>3</sup>		
Aldrin	–	0.25 E	A-P3	
Allyl chloride	carcinogen (cat. 3B)		AX (P3)	
1-Allyloxy-2,3-epoxypropane	–	–	A (P2)	
Allylpropyldisulfide	2	12	B (P2)	
Aluminium (respirable dust)	–	3	P2	
Aluminium hydroxide	–	3	P2	
Aluminiumoxide (respirable dust)	–	3	P2	
Aluminium oxide (fume)	–	3	P2	
0-Aminoazotoluol	–	–	A (P3)	
1-Aminobutane	2	6,1	A (P2)	
2-Aminobutane	2	6,1	AX (P2)	
4-Aminodiphenyl	–	–	A (P3)	
3-Amino-9-ethylcarbazol	–	–	A (P3)	
2-Amino-2-methylpropane	–	–	AX (P3)	
1-Aminopropane	–	–	K(P2)	
2-Aminopropane	5	12	K (P2)	
2-Aminopyridine	–	–	A-P3	
Amitrole	–	0.2 E	A (P2)	
Ammonia	20	14	K (P3)	
Ammonia in water	–	–	K (P2)	
Ammonia solution 25%	20	14	K (P2)	
Ammonium nitrate	–	–	NO-P3	
Aniline	2	7,7	A (P3)	
Anthracene	–	–	A-P3	
9,10-Anthraquinone	–	–	A (P2)	
Antimony	–	–	P2	

Contaminants	OEL		Filter type	Colour code
	ppm	mg/m <sup>3</sup>		
Antimony penta chlorid			B-P2	
Antimony trioxide	carcinogen (cat. 2)		P3	
Antimony hydrogen	–	0.3	B (P3)	
ANTU	–	0.3 E	B-P3	
Arsenic acid	carcinogen (cat. 1)		P3	
Arsenic pentoxide	carcinogen (cat. 1)		P3	
Arsenic acid	carcinogen (cat. 1)		P3	
Arsenic trioxide	carcinogen (cat. 1)		P3	
Arsenic hydrogen	0.005	0.016	B (P3)	
Asbestos carcinogen (cat. 1)			P3	
Auramine	–	–	A-P3	
Aziridine	carcinogen (cat. 2)		K (P3)	
Azo colorant	–	–	A (P3)	


















## B


























Barium chloride	–	0.5 E	P2	
Beechwood dust	–	5	P3	
Benzaldehyde	–	–	A (P2)	
Benzidine and its salts	–	–	A (P3)	
Benzene	1	3.2	A (P3)	
Benzene in water	–	–	A (P3)	
Benzine in water	–	–	A (P2)	
Benzo[a]pyrene	carcinogen (cat. 2)		A (P3)	
p-Benzochinone	carcinogen (cat. 3B)		A-P3	
Benzo[e]pyrene	–	–	A (P3)	
Benzylamine	–	–	A (P2)	
Beryllium	carcinogen (cat. 1)		P3	
Biphenyl	carcinogen (cat. 3B)		A-P2	
Bis(tributylzinn) oxide	0.002	0.05	B-P3	
Bitumen	–	–	A-P3	

Contaminants	OEL		Filter type	Colour code
	ppm	mg/m <sup>3</sup>		
Borax	–	–	P2	
Boroxide	–	–	P2	
Boric acid	–	0.5	B-P2	 
Boron trifluoride	0.35	1	B (P3)	 
2-Brombutane	–	–	A (P2)	 
Bromine	–	0.7	B (P2)	 
Bromobenzene	–	–	A (P2)	 
Bromochloro-methane	carcinogen (cat. 3B)		A (P2)	 
2-Bromo-2-chloro-1,1,1-trifluorethane	5	41	AX (P3)	 
Bromoform	–	–	A (P3)	 
2-Bromopentane	–	–	A (P2)	 
Brown coal tars	–	–	A-P3	 
1,3-Butadiene	carcinogen (cat.1)		AX (P3)	 
n-Butane	1000	2400	AX (P3)	 
n-Butanal	–	–	A (P2)	 
1-Butanol	100	310	A (P2)	 
2-Butanol	–	–	A (P2)	 
2-Butanone peroxide	–	–	B (P2)	 
1,4-Butane sultone	–	–	A (P3)	 
2,4-Butane sultone	–	–	A (P3)	 
2-Butenal (trans)	–	–	A (P3)	 
1-n-Butoxy-2,3-epoxypropane	–	–	A (P3)	 
1-tert-Butoxy-2,3-epoxypropane	–	–	A (P3)	 
2-Butoxyethanol	20	98	A (P2)	 
2-Butoxyethylacetone	20	130	A (P2)	 
1-Butyl acetate	200	950	A (P2)	 
2-Butyl acetate	200	950	A (P2)	 





Contaminants	OEL		Filter type	Colour code
	ppm	mg/m <sup>3</sup>		
tert-Butyl acetate	200	950	A (P2)	
n-Butyl acrylate	2	11	A (P2)	
Butyl formiate	–	–	A (P2)	
tert-Butyl hydroperoxide	–	–	B (P2)	
1-Butyl mercaptan	0.5	1.9	B (P2)	
n-Butyl methacrylate	–	–	A (P2)	
tert-Butyl peracetate	–	–	B (P2)	
p-tert-Butyl phenol	0.08	0.5	A-P2	
Butyl stearate	–	–	A (P2)	
p-tert-Butyltoluol	–	–	A (P3)	

## C























Cadmium	–	–	P3	
Cadmium chloride	–	–	P3	
Cadmium oxide	–	–	P3	
Cadmium sulfate	–	–	P3	
Calcium arsenate	–	–	P3	
Calcium bisulfide solution	–	–	E-P2	
Calcium chromate	–	–	P3	
Calcium cyanamide	–	1 E	P2	
Calcium hydroxide	–	–	P2	
Calcium oxide	–	–	P2	
Camphor	2	13	A-P2	
E-Caprolactam	–	5 E	A-P2	
Carbaryl	–	5 E	B (P2)	
Carbon disulfide	5	16	B (P3)	
Carbon monoxide	30	35	CO	
Carbon tetrachloride	0.5	3.2	A (P3)	
Carbon tetrachloride in water	–	–	A (P3)	

























Contaminants	OEL		Filter type	Colour code
	ppm	mg/m <sup>3</sup>		
caustic potash (>5%)	–	–	P2	
Caustic soda	–	–	P2	
p-Chloraniline	–	–	A-P3	
Chlorobenzene	10	47	A (P2)	
2-Chloro-1-bromoethane	–	–	A (P3)	
Chlordane	–	0.5	A (P3)	
Chlordecone	–	–	A (P3)	
Chlorine	0.5	1.5	B (P3)	
Chlorine dioxide	0.1	0.28	B (P2)	
Chloroacetic acid	1	4	A-P3	
Chloroacetic acid ethyl ester	1	5	A (P2)	
Chloroethane	40	110	AX (P3)	
2-Chloroethanol	1	3.3	A (P3)	
N-Chloroformyl-morpholin	–	–	A (P3)	
Chlorinated biphenyls (chlorine content 42%)	0.1	1.1	A (P3)	
Chlorinated biphenyls (chlorine content 54%)	0.05	0.7	A (P3)	
Chlorinated camphene (chlorine content 60%)	carcinogen (cat. 2)		A-P2	
3-Chloro-2-methyl-1-propene	–	–	A (P2)	
1-Chloronaphthaline	–	–	A (P2)	
1-Chloro-1-nitropropane	–	–	A NO-P3	
Chloroform	0.5	2.5	AX (P3)	
Chloroform in water	–	–	AX (P3)	
2-Chloroprene	carcinogen (cat. 2)		AX (P3)	
4-Chlor-o-toluidine	–	–	A-P3	
5-Chlor-o-toluidine	–	–	A-P3	

Contaminants	OEL		Filter type	Colour code
	ppm	mg/m <sup>3</sup>		
1-Chloropentane	–	–	A (P2)	
1-Chloropropane	–	–	AX (P2)	
2-Chloropropene	–	–	AX (P2)	
Chlorotrifluoride	–	–	B (P2)	
Chromium carbonyl	–	–	CO (P3)	
Chromium oxychloride carcinogen (cat. 2)			B (P3)	
Chromic acid anhydrid	carcinogen (cat. 2)		P3	
Citric acid	–	–	P2	
Coal tar	–	–	A-P3	
Cobalt	carcinogen (cat. 2)		P3	
Cobalt acetate tetrahydrate	–	–	P2	
Coconut oil	–	–	P2	
Copper	–	0.1	P2	
Copper chloride (solution)	–	0.1	P2	
Copper sulfate (solution)	–	0.1	P2	
Cotton dust	–	1.5 E	P2	
Cristobalite (respirable dust)	carcinogen (cat. 1)		P2	
Cumene	20	100	A (P2)	
Cyanoacrylate-methyl ester	2	9.2	B (P2)	
Cyanogen bromide	–	–	B-P3	
Cyanogen chloride	–	–	B (P3)	
Cyanuric chloride	–	–	B-P2	
Cyanuric chloride (suspension water)	–	–	B-P2	
Cyclohexane	200	700	A (P2)	
Cyclohexanol	50	210	A-P2	
Cyclohexanone	20	80	A (P2)	



























Contaminants	OEL		Filter type	Colour code
	ppm	mg/m <sup>3</sup>		
Cyclohexene	–	–	A (P2)	
Cyclohexylamine	2	8.2	A (P2)	
1,3-Cyclopentadiene	–	–	AX (P3)	
Cyclopentanone	–	–	A (P2)	


























## D

DDT	–	1	A (P3)	
Decaborane	0.05	0.25	B-P2	
n-Decane	–	–	A (P2)	
n-Decanol	–	–	A (P2)	
Demeton	0.01	0.1	A B (P3)	
Demeton methyl	0.5	4.8	A B (P3)	
Diacetyl peroxide	–	–	B-P3	
2,4-Diaminoanisole	–	–	A (P3)	
3,3'-Diaminobenzidine	–	–	A (P3)	
3,3'-Diamino benzidine-tetrahydrochloride	–	–	A (P3)	
4,4'-Diamino diphenyl methane	carcinogen (cat. 2)		A (P3)	
1,2-Diaminoethane	–	–	A (P2)	
2,4-Diaminotoluene	–	–	A-P3	
Diatomaceous earth, calcinated	–	0.3 A	P2	
Diatomaceous earth, uncalcinated	–	4 E	P2	
Diazinon	–	0.1 E	A (P2)	
Diazomethane	–	–	B (P3)	
Dibenzoyl peroxide	–	5 E	B-P2	
Dibenzylamine	–	–	A (P2)	
Dibenzylether	–	–	A (P2)	
Diboran e	–	–	B (P2)	
1,2-Dibromo-3-chloropropane	–	–	A (P3)	














Contaminants	OEL		Filter type	Colour code
	ppm	mg/m <sup>3</sup>		
1,2-Dibromomethane	carcinogen (cat. 2)		A (P3)	
Dibutyl ether	–	–	A (P2)	
Dibutyl phthalate	–	–	A (P2)	
3,3'-Dichlorbenzidine	carcinogen (cat. 2)		A (P3)	
1,2-Dichlorbenzene	10	61	A (P2)	
1,3-Dichlorbenzene	3	20	A (P2)	
1,4-Dichlorbenzene	20	120	A-P2	
1,4-Dichloro-2-butene	–	–	A (P3)	
2,2'-Dichloro diethyl ether	10	58	A (P3)	
2,2'-Dichloro diethyl sulfide	–	–	B (P3)	
Dichloro diisopropyl ether	–	–	A (P2)	
Dichloro dimethyl ether	–	–	A (P3)	
1,1-Dichloroethane	100	410	AX (P3)	
1,2-Dichloroethane	–	–	A (P3)	
1,1-Dichloroethene	2	8	AX (P3)	
1,2-Dichloroethene (cis)	200	800	AX (P3)	
1,2-Dichloroethene (trans)	200	800	AX (P3)	
Dichlormethane	75	260	AX (P3)	
Dichlormethane in water	–	–	AX (P3)	
1,2-Dichloro methoxyethane	–	–	A (P3)	
1,1-Dichloro 1-nitroethane	–	–	A NO-P3	
2,4-Dichloro phenoxy aceatic acid	–	1	A (P2)	
1,2-Dichloropropane	carcinogen (cat. 3B)		A (P2)	
1,3-Dichloro 2-propanol	–	–	A (P3)	
















Contaminants	OEL		Filter type	Colour code
	ppm	mg/m <sup>3</sup>		
1,3-Dichloro propene (cis- und trans)	–	–	A (P3)	
2,2-Dichloro propionic acid	–	–	A (P2)	
1,2-Dichloro-1, 1,2,2-tetrafluoroethano	1000	7100	AX (P3)	
2,4-Dichlortoluene	5	30	A (P2)	
Dichlorvos	0.11	1	A (P3)	
Dicyclohexyl methane-4,4'-diisocyanate	–	–	A B (P3)	
Dicyclohexyl peroxide	–	–	B-P3	
Dicyclopentadiene	0.5	2.7	A-P2	
Dieldrin	–	0.25E	A (P3)	
Diesel in water	–	–	A (P2)	
Dieselfuel	–	–	A (P2)	
Diethanolamine	–	–	A-P2	
Diethylamine	5	15	AX (P3)	
2-Diethylamino ethanol	5	24	A (P2)	
Diethylcarbamid acid chloride	–	–	B (P3)	
Diethyl carbonate	–	–	A (P2)	
Diethyleneglycole	10	44	A (P2)	
Diethylenetriamine	–	–	A (P2)	
Diethylether	400	1200	AX (P3)	
N,N-Diethyl hydroxylamine	–	–	A (P2)	
Diethyl oxalate	–	–	A (P2)	
Diethyl phtalate	–	–	A (P2)	
Diethyl sebacate	–	–	A (P2)	
Diethyl sulfate	carcinogen (cat. 2)		A (P3)	
Diethyl sulfide	–	–	B (P2)	
Difluorobromomethane	–	–	AX (P3)	









Contaminants	OEL		Filter type	Colour code
	ppm	mg/m <sup>3</sup>		
Difluorodibromo methane	–	–	AX (P3)	
Diglycidyl ether	carcinogen (cat. 3B)		A (P3)	
1,2-Dihydroxybenzene	–	–	A-P2	
1,3-Dihydroxybenzene	4	20 E	A-P2	
1,4-Dihydroxybenzene	carcinogen (cat. 2)		A-P2	
Diisobutylketone	–	–	A (P2)	
Diisopropylamine	–	–	A B (P2)	
Diisopropylether	200	850	A (P2)	
Dilauroyl peroxide	–	–	B (P2)	
3,3'-Dimethoxybenzidine	–	–	A (P3)	
1,1-Dimethoxyethane	–	–	AX (P3)	
1,2-Dimethoxyethane	–	–	A (P2)	
Dimethoxymethan	1000	3200	AX (P3)	
N,N-Dimethyl acetamide	10	36	A (P2)	
Dimethylamine	2	3.7	K (P2)	
1-(Dimethylamino)-2-propanol	–	–	A (P2)	
N,N-Dimethylaniline	5	25	A (P3)	
3,3'-Dimethylbenzidine	–	–	A (P3)	
_,_-Dimethylbenzylhydroperoxide	–	–	B-P2	
2,2-Dimethylbutane	200	720	AX (P3)	
2,3-Dimethylbutane	200	720	AX (P3)	
1,3-Dimethylbutyl acetate	–	–	A (P2)	
Dimethyl carbamids acid chloride	–	–	B (P3)	
N,N-Dimethylcyclohexylamine	–	–	A (P2)	
3,3'-Dimethyl-4,4'-diaminodiphenylmethane	–	–	A (P3)	

Contaminants	OEL		Filter type	Colour code
	ppm	mg/m <sup>3</sup>		
Dimethyl disulfide	–	–	B (P3)	
N,N-Dimethyl-ethanolamine	–	–	A (P2)	
Dimethyl ether	1000	1900	AX (P3)	
N,N-Dimethyl-ethylamine	2	6.1	K (P2)	
N,N-Dimethyl-formamide	10	30	A (P2)	
1,1-Dimethylhydrazine	–	–	K (P3)	
1,2-Dimethylhydrazine	–	–	K (P3)	
2,2-Dimethyl propane	1000	3000	AX (P2)	
Dimethylsulfate	carcinogen (cat. 2)		A (P3)	
Dimethylsulfide	–	–	B (P3)	
1,2-Dinitrobenzene	–	–	A NO-P3	
1,3-Dinitrobenzene	–	–	A NO-P3	
1,4-Dinitrobenzene	–	–	A NO-P3	
1,5-Dinitronaphthalene	–	–	A NO-P3	
2,6-Dinitronaphthalene	–	–	A NO-P3	
4,6-Dinitro-o-kresole	–	–	A NO-P3	
2,3-Dinitrotoluene	–	–	A NO-P3	
2,4-Dinitrotoluene	–	–	A NO-P3	
2,5-Dinitrotoluene	–	–	A NO-P3	
2,6-Dinitrotoluene	carcinogen (cat. 2)		A NO-P3	
3,4-Dinitrotoluene	carcinogen (cat. 2)		A NO-P3	
3,5-Dinitrotoluene	–	–	A NO-P3	
1,4-Dioxane	20	73	A (P3)	
1,3-Dioxolan	100	310	A (P2)	
Dipentene	20	110	A (P2)	
Diphenyl ether	1	7.1	A-P2	
Diphenyl ether/ biphenylcompound	–	–	A-P2	













Contaminants	OEL		Filter type	Colour code
	ppm	mg/m <sup>3</sup>		
Diphenylmethan-4, 4'-diisocyanate	–	0.05	B (P2)	
Diphenylmethan-4, 4'-diisocyanate, liquid (50 °C)	–	–	B-P2	
Diphosphorus-pentasulfide	–	1	P2	
Dipropylamine	–	–	A B (P2)	
Dipropylene-glycolmethyl ether	–	–	A (P2)	
Dipropyl ether	–	–	A (P2)	
Disulfur dichloride	–	–	B (P2)	
Di-sec-octyl phthalate	–	10	A (P2)	
Disulfiram	–	2 E	B (P2)	
Di-tert-butylperoxide	–	–	B (P2)	
1,2-Divinylbenzene	–	–	A (P2)	
1,3-Divinylbenzene	–	–	A (P2)	
Dodecylbenzenel	–	–	A (P2)	

## E







Endrin	–	0.1 E	A (P3)	
Enflurane	20	150	AX (P3)	
EPN	–	0.5	A (P3)	
1,2-Epoxybutane	–	–	AX (P3)	
1,2-Epoxypropane	carcinogen (cat. 2)		AX (P3)	
Ethanol	500	960	A (P2)	
Ethanolamine	1	2,5	A (P2)	
2-Ethoxyethanol	5	19	A (P2)	
Ethyl acetate	400	1500	A (P2)	
Ethyl acrylate	5	21	A (P2)	
Ethylamine	5	9.4	K (P2)	
Ethylbenzene	100	440	A (P2)	
Ethyl carbamate	–	–	A-P3	

Contaminants	OEL		Filter type	Colour code
	ppm	mg/m <sup>3</sup>		
Ethylene glycol	10	26	A (P2)	
Ethylene glykol-monoisopropyl ether	5	22	A (P2)	
Ethylene oxide	carcinogen (cat. 2)		AX (P3)	
Ethyl formate	100	310	AX (P3)	
2-Ethyl-1-hexanol	20	110	A (P2)	
2-Ethylhexylamine	–	–	A (P2)	
Ethyl mercaptan	0.5	1.3	AX (P3)	
Ethyl propionate	–	–	A (P2)	












## F

Fenthion	–	0.2 E	A-P3	
Ferbam	–	–	A (P2)	
Ferrovandium (dust)	–	–	P2	
Fibers (inorg.)	–	–	P2	
Fluoride	1	1.6	B (P3)	
Fluorobenzene	–	–	A (P2)	
Formaldehyde	0.3	0.37	B (P3)	
Formamide	–	–	A (P2)	
Formic acid	5	9,5	B [E] (P2)	
Furan	–	–	AX (P2)	
Furfurol	carcinogen (cat. 3B)		A (P3)	
Furfuryl alcohol	10	41	A (P2)	
















## G



Premium gasoline	–	–	A (P2)	
Regular gasoline, lead free	–	–	A (P2)	
Gelatine	–	–	P2	
Glutaraldehyde	0.05	0.21	A (P2)	
Glycerine	–	50	A (P2)	
Glycidol	carcinogen (Kat. 2)		A (P3)	

Contaminants	OEL		Filter type	Colour code
	ppm	mg/m <sup>3</sup>		
Glyoxal	–	–	AX (P2)	
Graphite	–	3	P2	
Graphite, dust compounds	–	–	P2	
<b>H</b>				
Hafnium	–	–	P2	
Heptachlor	–	0.5 E	A-P3	
n-Heptane	500	2100	A (P2)	
2-Heptanone	–	238	A (P2)	
3-Heptanone	10	47	A (P2)	
4-Heptanone	–	–	A (P2)	
Hexachlorobenzene	–	–	A (P2)	
Hexachloroethane	1	9.8	A-P2	
Hexamethylen-diamin	–	–	A-P2	
1,6-Hexa-methylene diisocyanate	0.005	0.035	B-P3	
Hexamethylene-tetramin	–	–	B K (P2)	
Hexamethyl-phosphoric triamide	–	–	A (P3)	
n-Hexane	50	180	A (P2)	
n-Hexanol	50	210	A (P2)	
2-Hexanone	5	21	A (P3)	
1-Hexen	–	–	AX (P2)	
2-Hexen (cis- und trans isomers)	–	–	A (P2)	
Hexylamin	–	–	A (P2)	
Hexylenglycol	10	49	A (P2)	
Hydrazine	carcinogen (cat. 2)		K (P3)	
Hydrazoic acid	0.1	0.18	B (P2)	
Hydrochloric acid 32% 2		3	B [E]-P2	


Contaminants	OEL		Filter type	Colour code
	ppm	mg/m <sup>3</sup>		
Hydrochloric acid fuming 37%	–	–	B [E]-P2	
Hydrogen bromide	2	6.7	B [E] (P2)	
Hydrogen chloride	2	3	B [E]-P2	
Hydrogen cyanide	1.9	2.1	B (P3)	
Hydrogen cyanide in water	–	–	B (P3)	
Hydrogen fluoride	1	0.83	B [E] (P3)	
Hydrogen peroxide	0.5	0.71	CO[NO]P3	
Hydrogen selenide	–	0.05 E	B (P3)	
Hydrogen sulfide	5	7.1	B (P3)	
Hydroxylamine	–	–	B [K] (P2)	
4-Hydroxy-4-methyl pentan-2-on	20	96	A (P2)	

## I



Iod	–	–	B-P2	
Iodmethane	–	–	AX (P3)	
Iron chloride	–	–	B (P2)	
Iron oxide	–	3	P2	
Iron pentacarbonyl	0.1	0.81	CO (P3)	
Iron sulfate	–	–	P2	
Isobutyl acetate	100	480	A (P2)	
Isobutylamine	2	6.1	A (P2)	
Isobutylformate	–	–	A (P2)	
Isobutyraldehyde	–	–	AX (P3)	
Isoflurane	–	–	AX (P3)	
Isooctane	500	2400	A (P2)	
Isophoron di-isocyanate	0.005	0.046	B (P3)	
Isopropyl acetate	100	420	A (P2)	
Isopropyl chloride	–	–	AX (P2)	

Contaminants	OEL		Filter type	Colour code
	ppm	mg/m <sup>3</sup>		
Isopropyl nitrate	–	–	A NO-P2	
Isopropyl oil	–	–	A (P3)	










## J

Jet fuel F34	–	–	A (P2)	
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





## K

Kerosene	–	–	A (P2)	
Kerosene in water	–	–	A (P2)	



























## L



























Lactic acid	–	–	P2	
Lead	–	0.15	P2	
Lead (II) acetate-Trihydrat	–	–	P2	
Lead arsenate	–	–	P3	
Lead chromate	–	–	P3	
Lead nitrate	–	0.15	NO-P3	
Linseed oil	–	–	P2	
Lindane	–	0.1	A-P3	
Lithium hydride	–	0.025 E	P3	





























## M

























Magnesiumchloride (solution)	–	–	P2	
Magnesiumhydroxide (solution)	–	–	P2	
Magnesiumoxide	–	3	P2	
Magnesiumsulfate	–	–	P2	
Malathion	–	15 E	A (P2)	
Maleic acid	–	–	A-P2	
Maleic acid anhydride	0.1	0.41	A-P2	
Manganese	–	0.5 E	P2	
Mercapto-acetic acid	–	–	B (P3)	










Contaminants	OEL		Filter type	Colour code
	ppm	mg/m <sup>3</sup>		
2-Mercaptoethanol	–	–	B (P3)	
Mercury	–	0.1	Hg-P3	
Mercury chloride (solution)	–	0.1 E	P3	
Methacrylonitrile	–	–	A (P3)	
Methacrylic acid	5	18	A (P2)	
Methanol	200	270	AX (P3)	
Methoxychlor	–	15 E	A (P2)	
2-Methoxyethanol	5	16	A (P2)	
2-Methoxyethyl acetate	5	25	A (P2)	
1-Methoxy-2-propanol	100	370	A (P2)	
2-Methoxy-1-propanol	5	19	A (P2)	
1-Methoxy-2-propylacetate	50	270	A (P2)	
2-Methoxy-1-propylacetate	5	28	A (P2)	
Methyl acetate	200	610	AX (P3)	
Methyl acrylate	5	18	A (P2)	
Methylamine	10	13	K (P2)	
N-Methylaniline	0.5	2.2	A (P3)	
Methyl bromide	–	–	AX (P3)	
2-Methylbutane	1000	3000	AX (P3)	
Methylcyclohexane	200	810	A (P2)	
Methylcyclohexanol	6	28	A (P2)	
4,4'-Methylene-bis(2-chloranilin)	–	0.02	A (P3)	
4,4'-Methylene-bis(N,N-dimethylanilin)	–	0.1 E	A (P3)	
Methyl ethyl ketone	200	600	A (P2)	
Methylformate	50	120	AX (P3)	
N-Methyl hydrazine	–	–	B (P3)	





















Contaminants	OEL		Filter type	Colour code
	ppm	mg/m <sup>3</sup>		
Methyl isobutyl ketone	20	83	A (P2)	
Methyl isocyanate	0.01	0.024	B (P3)	
Methyl mercaptan	0.5	1	B (P2)	
Methyl methacrylate	50	210	A (P2)	
N-Methyl-2,4,6-N-tetranitroanilin	carcinogen (cat. 3B)		A NO-P3	
2-Methylpentan	200	720	AX (P2)	
3-Methylpentan	200	720	AX (P2)	
4-Methylpentan-2-ol	20	85	A (P2)	
4-Methylpent-3-en-2-on	5	20	A (P2)	
2-Methyl-1-propanol	100	310	A B (P2)	
2-Methyl-2-propanthiol	–	–	AX B (P2)	
Methylpropionate	–	–	A (P2)	
Methylpropylketone	–	–	A (P2)	
N-Methyl-2-pyrrolidone (vapor)	20	82	A (P2)	
Methyl mercury	carcinogen (cat. 3B)		Hg (P3)	
Methylstyrene	100	490	A (P2)	
Methyl-tert.-butylether	50	180	AX (P3)	
Mevinphos	0.01	0.093	A-P3	
Michler's Ketone	–	–	A (P3)	
Mineral fiber	–	–	P3	
Monochloro-dimethyl ether	–	–	AX (P3)	
Morpholine	10	36	A (P2)	
Motor oils, used	–	–	A-P3	
<b>N</b>				
Naled	–	1 E	A-P2	
Naphta	–	–	A (P2)	
Naphthalene	carcinogen (cat. 2)		A-P2	



























Contaminants	OEL		Filter type	Colour code
	ppm	mg/m <sup>3</sup>		
1-Naphthylamine	0.17	1 E	A-P3	
2-Naphthylamine	carcinogen (cat. 1)		A-P3	
1,5-Naphthylene-diisocyanate	–	0.05	B (P3)	
Nickel	carcinogen (cat. 1)		P3	
Nickel, sulfidic ores	carcinogen (cat. 1)		P3	
Nickel carbonate	carcinogen (cat. 1)		P3	
Nickel(II)-chloride	carcinogen (cat. 1)		P2	
Nickel oxide	carcinogen (cat. 1)		P3	
Nickel compounds in the form of respirable droplets	carcinogen (cat. 1)		P3	
Nickel sulfide	carcinogen (cat. 1)		P3	
Nickel tetracarbonyl	–	–	CO-P3	
Nicotine	–	0.5	A (P3)	
Nitric acid	1	2.6	B NO-P3	
Nitric acid 65%	1	2.6	NO-P3	
Nitric acid 90%	1	2.6	NO-P3	
5-Nitroacenaphthene	–	–	A NO-P3	
2-Nitro-4-aminophenol	–	–	A NO-P3	
4-Nitroaniline	carcinogen (cat. 3A)		A NO-P3	
Nitrobenzene	–	1	A NO-P3	
4-Nitrobiphenyl	–	–	A NO-P3	
Nitroethane	100	310	A NO-P3	
Nitrogen dioxide	carcinogen (cat. 3B)		NO-P3	
Nitrogen monoxide	–	–	NO-P3	
Nitroglycerine	carcinogen (cat. 3B)		A NO-P3	
Nitroglycol	0.05	0.32	A NO-P3	
Nitromethane	carcinogen (cat. 3B)		A NO-P3	
1-Nitronaphthalene	–	–	A NO-P3	
2-Nitronaphthalene	carcinogen (cat. 2)		A NO-P3	










Contaminants	OEL		Filter type	Colour code
	ppm	mg/m <sup>3</sup>		
5-Nitro-o-toluidine	–	–	A NO-P3	
2-Nitro-p-phenyldiamine	–	–	A NO-P3	
1-Nitropropane	25	92	A NO-P3	
2-Nitropropane	carcinogen (cat. 2)		A NO-P3	
Nitropyrene (Mono,Di,Tri,Tetra)	–	–	A NO-P3	
Nitrogen gases	–	–	NO-P3	
N-Nitrosodiethanolamin	–	–	A NO-P3	
N-Nitrosodiethylamine	–	–	A NO-P3	
N-Nitrosodi-i-propylamine	–	–	A NO-P3	
N-Nitrosodimethylamine	–	–	A NO-P3	
N-Nitrosodini-butylamine	–	–	A NO-P3	
N-Nitrosodini-propylamine	–	–	A NO-P3	
N-Nitrosoethylphenylamine	–	–	A NO-P3	
N-Nitrosomethyl-ethylamine	–	–	A NO-P3	
N-Nitrosomethyl-phenylamine	–	–	A NO-P3	
N-Nitrosomorpholine	–	–	A NO-P3	
N-Nitrosopiperidine	–	–	A NO-P3	
N-Nitrosopyrrolidine	–	–	A NO-P3	
2-Nitrotoluene	carcinogen (cat. 2)		A NO-P3	
3-Nitrotoluene	carcinogen (cat. 3B)		A NO-P3	
4-Nitrotoluene	carcinogen (cat. 3B)		A NO-P3	
n-Nonane	–	–	A (P2)	
<b>O</b>				
Oakwood dust	–	5	P3	
n-Octane	500	2400	A (P2)	

Contaminants	OEL		Filter type	Colour code
	ppm	mg/m <sup>3</sup>		
n-Octanol	20	106	A (P2)	
1-Octen	–	–	A (P2)	
Oil	–	–	P2	
Osmium tetroxide	–	–	A-P3	
Oxalic acid dinitrile	5	11	B (P3)	
4,4'-Oxydianilene	–	–	A (P3)	
Ozone	carcinogen (cat. 3B)		NO-P3	



## P

Palmitic acid	–	–	P2	
Paraldehyd	–	–	A (P2)	
Paraquat dichloride	–	0.1 E	A (P3)	
Parathion (-ethyl)	–	0.1 E	A (P3)	
Pentaborene	0.005	0.013	B-P3	
Pentachloroethane	5	42	A (P3)	
Pentachloronaphthaline–	–	–	A-P2	
Pentachlorophenol	–	–	A-P3	
n-Pentane	1000	3000	AX (P3)	
n-Pentanol	20	73	A (P2)	
n-Pentylacetate	50	270	A (P2)	
Perchloroethylene	carcinogen (cat. 3B)		A (P3)	
Perchloroethylene in water	–	–	A (P3)	
Peracetic acid	–	–	B (P2)	
Permethrin	–	–	A (P2)	
Petrol	–	–	A (P2)	
Phenol	2	7.8	A-P3	
Phenolphthalein dissolved in ethyl alcohol	–	–	A (P2)	
Phenyl acetate	–	–	A (P2)	
p-Phenylendiamine	–	0.1 E	A (P3)	


Contaminants	OEL		Filter type	Colour code
	ppm	mg/m <sup>3</sup>		
Phenylhydrazine	carcinogen (cat. 3B)		A (P3)	
Phenyl isocyanate	0.01	0.05	B (P2)	
N-Phenyl-2-naphthylamine	–	–	A-P3	
Phosgene	0.02	0.082	B (P3)	
Phosphorous - oxychloride	0.2	1.3	B (P2)	
Phosphorous - pentachloride	–	1 E	B-P2	
Phosphorous - pentoxide	–	2 E	P2	
Phosphorous acid	–	2	P2	
Phosphorous - trichloride	0.5	2.8	B (P2)	
Hydrogen phosphide	0.1	0.14	B (P3)	
Phthalic anhydride	–	–	A-P2	
Polyvinyl chloride	–	3	P2	
Potassium chloride	–	–	P2	
Potassium chromate	carcinogen (cat. 2)		P2	
Potassium cyanide	–	–	B-P3	
Potassium hydroxide (anhydrous)	–	–	P2	
Potassium sulfate	–	–	P2	
Propanal	–	–	AX (P2)	
2-Propanol	200	500	A (P2)	
n-Propanol	–	–	A (P2)	
1,3-Propane sultone	–	–	A-P3	
2-Propanthiol	–	–	AX B (P2)	
Propargyl alcohol	2	4.7	A (P3)	
2-Propen-1-ol	2	4.8	A (P3)	
iso-Propenyl-benzene	50	250	A (P2)	
ε-Propiolactone	–	–	A (P3)	

Contaminants	OEL		Filter type	Colour code
	ppm	mg/m <sup>3</sup>		
Propionic acid	10	31	B (P2)	
Propoxur	–	2 E	B (P3)	
n-Propyl acetate	100	420	A (P2)	
1,2-Propylene-glycoldinitrate	0.05	0.34	A NO-P3	
Propylene imine	–	–	AX (P3)	
n-Propyl formiate	–	–	A (P2)	
Propyl mercaptan	–	–	B (P2)	
Pyrethrum	–	1 E	A (P2)	
Pyridine	carcinogen (cat. 3B)		A (P2)	













## Q

Quarz	carcinogen (cat. 1)		P2	
Fused quartz	–	0.3 A	A P2	

## R

Rotenone (standard)	–	–	A (P3)	
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## S



























Salicylic acid	–	–	A (P2)	
Sodium azide	–	0.2	P3	
Sodium benzoate	–	–	P2	
Sodium chlorate	–	–	P2	
Sodium chloride	–	–	P2	
Sodium chromate	carcinogen (cat. 2)		P3	
Sodium cyanide	–	3.8	B-P3	
Sodium fluoroacetate	–	0.05 E	B (P3)	
Sodium hydrogen carbonate	–	–	P2	
Sodium hydroxide (anhydrous)	–	–	P2	
Sodium silicate - solution	–	–	P2	
Sodium sulfate	–	–	P2	

Contaminants	OEL		Filter type	Colour code
	ppm	mg/m <sup>3</sup>		
Sodium thiosulfate	–	–	P2	<input type="checkbox"/>
Sulphur dichloride	–	–	B-P2	<input type="checkbox"/>
Sulphur dioxide	0.5	1.3 E	(P3)	<input type="checkbox"/>
Sulphur pentafluoride	–	–	B (P2)	<input type="checkbox"/>
Sulphuric acid	–	0.1	P2	<input type="checkbox"/>
Sulphuric acid fuming 65% SO <sub>2</sub>	–	–	B-P2	<input type="checkbox"/>
Sulphur trioxide	–	–	B-P2	<input type="checkbox"/>
Soap solution	–	–	P2	<input type="checkbox"/>
Selenium, amorphous	–	0.05 E	P3	<input type="checkbox"/>
Silver	–	0.1 E	P3	<input type="checkbox"/>
Silver nitrate solution	–	0.01 E	P2	<input type="checkbox"/>
Fused silica	–	0.3 A	P2	<input type="checkbox"/>
Silica fume	–	0.3	P2	<input type="checkbox"/>
Silica acids, colloidal amorphous	–	4 E	P2	<input type="checkbox"/>
Silicone carbide (fibre-free)	–	3	P2	<input type="checkbox"/>
Stearic acid	–	–	A (P2)	<input type="checkbox"/>
Strontiumchromate	–	–	P3	<input type="checkbox"/>
Strychnine	–	–	A (P3)	<input type="checkbox"/>
Styrene	20	86	A (P2)	<input type="checkbox"/>
Sulfotep	0.0075	0.1	A (P3)	<input type="checkbox"/>
Sulfuryl chloride	–	10	B-P2	<input type="checkbox"/>























## T

Talc (free of asbestos fibers)	carcinogen (cat. 3B)		P2	<input type="checkbox"/>
Tannic Acid	–	–	P2	<input type="checkbox"/>
Tantalum	–	3	P2	<input type="checkbox"/>
Tar fumes	–	–	A-P3	<input type="checkbox"/>
Tartaric acid	–	–	P2	<input type="checkbox"/>



Contaminants	OEL		Filter type	Colour code
	ppm	mg/m <sup>3</sup>		
Tellurium and compounds	–	–	P3	
TEPP	0.005	0.06	A (P3)	
Tetra ethyl lead	–	0.05	A (P3)	
Turpentine oil	carcinogen (cat. 3A)		A (P2)	
1,1,2,2-Tetra-bromoethane	–	–	A (P3)	
2,3,7,8-Tetrachloro-dibenzo-p-dioxine	–	–	A (P3)	
1,1,1,2-Tetrachloro-2,2-difluoroethane	200	1700	A-P2	
1,1,2,2-Tetrachloro-1,2-difluoroethan	200	1700	A-P2	
1,1,2,2-Tetra-chloroethane	1	7	A (P3)	
Tetraethyl silicate	10	86	A (P2)	
Tetrahydrofuran	50	150	A (P2)	
Tetrahydrothiophene	50	180	B (P2)	
1,2,4,5-Tetra-methylbenzene	–	–	A (P2)	
Tetramethyl succinitrile	–	1	A-P2	
Tetranitromethane	carcinogen (cat. 2)		NO-P3	
Tetraphosphorus	–	0.01	P3	
4,4'-Thiodianiline	–	–	B (P3)	
Thiourea	–	–	B (P3)	
Thionyl chloride	–	–	B (P2)	
Thiram	–	1 E	B (P2)	
Tin(IV) chloride	–	2 E	B-P2	
Titanium dioxide	–	3	P2	
o-Toluidine	–	–	A (P3)	
p-Toluidine	–	–	A-P3	
Toluene	50	190	A (P2)	
Toluene in water	–	–	A (P2)	

Contaminants	OEL		Filter type	Colour code
	ppm	mg/m <sup>3</sup>		
2,4-Toluylen-diisocyanate	0.005	0.035	A B (P3)	
2,6-Toluylen diisocyanate	0.005	0.035	A B (P3)	
Tributylphosphate	1	11	A (P2)	
Tributyltin benzoate	0.002	0.05	B-P3	
Tributyltin chloride	0.002	0.05	B-P3	
Tributyltin fluoride	0.002	0.05	B-P3	
Tributyltin linoleate	0.002	0.05	B-P2	
Tributyltin methacrylate	0.002	0.05	B-P3	
Tributyltin naphthenate	0.002	0.05	B-P2	
1,2,4-Trichlorobenzene	0.5	3.8	A (P2)	
2,3,4-Trichloro-1-butene	—	—	A (P3)	
1,1,1-Trichloroethane 200		1100	A (P2)	
1,1,2-Trichloroethane 10		55	A (P3)	
1,1,1-Trichloroethane in water	—	—	A (P2)	
Trichloroethylene	carcinogen (cat. 1)		A (P3)	
Trichloroethylene in water	—	—	A (P3)	
Trichloronaphthalene	—	—	A-P2	
Trichloronitromethane	0.1	0.68	A NO-P3	
2,4,5-Trichloro phenoxyacetic acid	—	10	B (P2)	
1,2,3-Trichloropropane	carcinogen (cat. 2)		A (P2)	
, , -Trichlorotoluene	carcinogen (cat. 2)		B (P3)	
Tridymite	carcinogen (cat. 1)		P2	
Triethanolamine	—	—	A (P2)	
Triethylamine	1	4.2	A (P2)	
Triethylentetramine	—	—	A (P2)	

Contaminants	OEL		Filter type	Colour code
	ppm	mg/m <sup>3</sup>		
Trimanganese-tetroxide	–	0.5	P2	
Trimellitic anhydride (fume)	–	0.04	A (P3)	
Trimethylamine	2	4.9	B (P2)	
2,4,5-Trimethylaniline	–	–	A-P3	
1,2,3-Trimethylbenzene	20	100	A (P2)	
1,2,4-Trimethylbenzene	20	100	A (P2)	
1,3,5-Trimethylbenzene	20	100	A (P2)	
3,5,5-Trimethyl-2-cyclohexen-1-one	2	11	A (P2)	
2,4,4-Trimethyl-1-pentene	–	–	A (P2)	
Trimethyl phosphate	–	–	A (P3)	
2,4,7-Trinitrofluorenone	–	–	A NO-P3	
2,4,6-Trinitrophenol	–	0.1 E	A NO-P3	
2,4,6-Trinitrotoluene	0.011	0.1	A NO-P3	
Tri-p-cresyl phosphate	–	–	A (P2)	
<b>U</b>				
n-Undecane	–	–	A (P2)	
<b>V</b>				
Vanadium pentoxide	–	0.05	A P3	
Vinyl acetate	5	18	A (P2)	
Vinyl bromide	–	–	AX (P3)	
Vinyl chloride	3	7.77	AX (P3)	
4-Vinyl-1,2-cyclohexendiepoxyd	–	–	A (P3)	
<b>W</b>				
Warfarin	–	0.5	A-P3	
White spirit	500	960	A (P2)	

Contaminants	OEL		Filter type	Colour code
	ppm	mg/m <sup>3</sup>		
Wood oil	–	–	P2	<input type="checkbox"/>
Wood dust (except for beech and oak dust)	–	–	P3	<input type="checkbox"/>

## X

Xylenol	–	–	A-P3	<input type="checkbox"/>
Xylidine	carcinogen (Kat. 3A)		A-P3	<input type="checkbox"/>
Xyloene	100	440	A (P2)	<input type="checkbox"/>
Xylene in water	–	–	A (P2)	<input type="checkbox"/>

## Y

Yttrium	–	–	P2	<input type="checkbox"/>
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## Z

Zinc chromate	–	–	P3	<input type="checkbox"/>
Zinc sulfate	–	–	P2	<input type="checkbox"/>
Zinc oxide fume	–	1	P2	<input type="checkbox"/>

**Indication E:** with reference to the inhalable fraction

**Indication A:** with reference to the alveolar fraction

No responsibility is taken for the correctness of this information.



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