

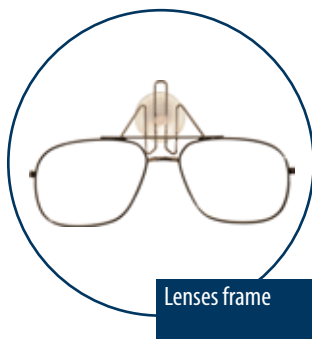
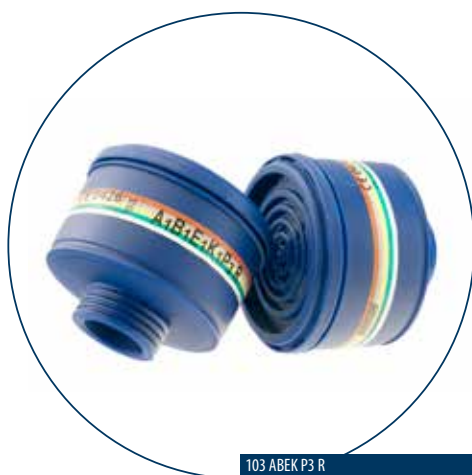
FILTERS AND ACCESSORIES

Filters are identified by a colour and a letter in conformity with the protection given as specified in **EN 14387:2004+A2:2008** (gas and combined), **EN 143:2000/A1: 2006** (particle),

EN 12491:1998 +A2:2008 (particle and combined filters for PAPR) and **DIN 58620:2006** for CO.

Consult the table "GUIDE TO FILTER SELECTION" at page 68 for further information and details.

Filters	
12415LD00	100 LD P3 R
124200000	200 A2
124220000	200 LBR A2
123100000	201 B2
123110000	201 E2
124210000	100 K2
123200000	201 A2B2
123220000	201 A2B2E2
124410000	202 A2B2E2K2
124430000	202 AX
124550000	203 AXP3 NR D
124420000	202 A2P3 R D
123300000	202 B2P3 R D
123310000	202 E2P3 R D
124320000	201 K2P3 R D
123320000	202 A2B2P3 R D
123350000	202 A2B2E2P3 R D
124530000	203 A2B2E2K2P3 R D
124540000	203 A2B2E2K2HGP3 R D
124600000	203 UP3
114180000	103 A1P3 R
114190000	103 A1B1E1K1P3 R
124720000	205 A2B2E2K1 P3 R D Formaldehyde
124730000	205 A2B2E2K1 P3 R D Reactor
124740000	205 A2 P3 R D Reactor



GAS AND DUST FILTERS

When choosing a filter, it is necessary to consider a series of factors which cannot be defined beforehand but they come only from a proper and careful risk analysis.

The type of application, the pollutant(s), the concentration, the temperature, the relative humidity, the smell threshold, the individual characteristics of the user are only some of the factors to be consider for a correct selection of a filter.

Filtering respirators protect from gases and/or vapours and/or dusts, fumes, mists because the filters retain by a chemical/physical action the airborne pollutants.

Depending on the protection given filters are divided into Gas, Particle and Combined filters, the latter being a combination of the previous two.

The standard EN 14387 gives the minimum requirements, the test methods and the marking for gas and combined filters. The standard EN 143 gives the same for Particle filters.

In the standards above, gas filters are divided in types A, B, E, K plus some other special filter as NO and Hg depending on the chemicals they protect from.

They are also classified 1, 2, 3 according to their absorption capacity. Particle filters are indicated by the letter P followed by the number 1 or 2 or 3 according to their efficiency.

Each filter type is then given a specific colour code.

Beside the main types, the so called multi-purpose filters offer at the same time the protection given by more filter types, e.g. AB, BK, ABEK.

SPASCIANI filters are produced in the series 100 and 200 with polypropylene housing, all fitted with standard connection EN 148-1. Filter respirators can only be used in environments where the Oxygen concentration in the air is at least 17% in volume.

When this condition is not granted the use of filtering devices is contraindicated. In such cases one shall resort to isolating breathing apparatus or to fresh air respirators.

It is not possible to state beforehand the duration of gas filters, this depending on the concentration of the pollutant but also on many more factors such as the humidity of air, the temperature, the breathing rate etc.

TYPE	COLOR	PROTECTION
AX		Organic Vapours, b.p. <65 °C
		Organic Vapours, b.p. <65 °C + dusts, fumes, mists
A		Organic Vapours, b.p. >65 °C
		Organic Vapours, b.p. >65 °C + dusts, fumes, mists
B		Inorganic Gases
		Inorganic Gases + dusts, fumes, mists
E		Sulphur Dioxide and Acids
		Sulphur Dioxide and Acids + dusts, fumes, mists
K		Ammonia and basic vapours
		Ammonia and basic vapours + dusts, fumes, mists
P		Dusts, fumes, mists
Hg		Mercury vapours + dusts, fumes, mists
NO		Nitrous vapours + dusts, fumes, mists
Reactor		CH ₃ I + radioactive dusts, fumes, mists
UP3		All gases and vapours + dusts, fumes, mists

GUIDE TO FILTER SELECTION

CHEMICAL NAME	CAS N°	FORMULA	B.P. °C	FILTER	COLOR	ODOUR THRESHOLD mg/m ³	TLV ppm	TLV mg/m ³	PHYSIOLOGICAL EFFECTS
Acetaldehyde	75-07-0	CH ₃ CHO	28,8	AX	Brown	0,0002	25C	45C	Irritates nose, eyes ,cough headache
Acetic acid	64-19-7	C ₂ H ₄ O ₂	118	A	Brown	2,5	10	25	Caustic, irritating, causes dermatitis
Acetic ether	-	-	-	A	Brown	-	-	-	Irritating: mucous membranes, narcotic, anemia, leukocytosis
Acetone	67-64-1	C ₃ H ₆ O	56,6	AX	Brown	47,5	500	1188	Irritating: skin, mucous membranes, respiratory tract
Acetonitrile	75-05-8	C ₂ H ₃ N	1,1	A	Brown	70	40	67	Highly toxic, headache, convulsions, dizziness
Acetylene	74-86-2	C ₂ H ₂	-84	**		657,2	nn	nn	Asphyxiating
Acetylene tetrachloride	79-34-5	C ₂ H ₂ Cl ₄	146,3	A	Brown	21	1	6,9	Nausea, vomiting, headache, gastrointestinal disorders
Acrolein	107-02-8	C ₃ H ₄ O	52,5	A	Brown	0,05	0,1 C	0,23 C	Irritating eyes and respiratory tract
Acrylonitrile	107-13-1	C ₃ H ₃ N	77,3	A B	Brown Grey	8,1	2	4,3	Highly toxic, headache, convulsions, dizziness, suspect carcinogen
Acrylonitrile	107-13-1	C ₃ H ₃ N	77	A	Brown	8,1	2	4,3	Highly toxic, headache, convulsions, dizziness, carcinogenicity
Allyl chloride	107-05-1	C ₃ H ₅ Cl	44,6	AX	Brown	1,41	1	3	Mucous irritants, liver and kidney damage
Ammonia	7664-41-7	NH ₃	-33,3	K	Green	0,026	25	17	Irritating eyes and respiratory tract, bronchitis edema
Aniline	62-53-3	C ₆ H ₇ N	184,4	A	Brown	-	2	7,6	Harmful central nervous system, eye disorders, tumors
Arsenic	7440-38-2	As ₄	-	P3	White	-	-	0,01	Highly toxic, carcinogen
Arsenic trioxide	1327-53-3	As ₂ O ₃	460	BP3	Grey White	-	-	0,01	Carcinogen
Arsine	7784-42-1	AsH ₃	-55	B	Grey	0,84	0,05	0,16	Headache, gastric disorders
Asbestos	1332-21-4	-	-	P3	White	-	0,2	-	Carcinogen
Benzene	71-43-2	C ₆ H ₆	80	A	Brown	4,5	0,5	1,6	Toxic, irritating, carcinogen
Benzyl bromide	100-39-0	C ₇ H ₇ Br	198	A	Brown	-	-	-	Tear gas and toxic
Benzyl chloride	100-44-7	C ₇ H ₇ Cl	179	A	Brown	0,235	1	5,2	It irritates the mucous membranes strongly carcinogenic
Beryllium	7440-41-7	Be	2970	P3	White	-	-	0,002	Lung diseases. Carcinogenic suspicion
Bis (2-chloroethyl) sulfide	505-60-2	C ₄ H ₈ Cl ₂ S	228	B	Grey	-	-	-	Strong irritant. Vomiting, headache
Bromine	7726-95-6	Br ₂	58,73	B	Grey	0,329	0,1	0,66	Irritates respiratory system burns on the skin
Bromoacetic acid methyl ester	96-32-2	C ₅ H ₆ OBr	136	A	Brown	-	-	-	Tear gas, toxic
Bromoform	75-25-2	CHBr ₃	149,5	A	Brown	5300	0,5	5,2	Irritates the mucous membranes. At high doses it is deadly
Bromomethane	74-83-9	CH ₃ Br	3,56	AX	Brown	80	1	9	Irritating nerve and vascular disorders
Bromotoluene	95-46-5	C ₇ H ₇ Br	183,7	A	Brown	-	-	-	Irritating
Bromotrifluoroethylene	598-73-2	C ₂ BrF ₃	-2,5	AX	Brown	-	-	-	Toxic damage the kidneys, liver. Cause of nausea

CHEMICAL NAME	CAS N°	FORMULA	B.P. °C	FILTER	COLOR	ODOUR THRESHOLD mg/m ³	TLV ppm	TLV mg/m ³	PHYSIOLOGICAL EFFECTS		
Butyl alcohol (n-)	71-36-3	C4H10O	117,5	A	Brown	0,36	50 C	152 C	Narcotic, dermatitis, liver damage and eyes		
Butyl alcohol (ter)	75-65-0	C4H10O	99,5	A	Brown	219	100	303	Narcotic, dermatitis, liver damage and eyes		
Carbon dioxide	124-38-9	CO ₂	-	**		-	5000	9000	Asphyxiating		
Carbon disulfide	75-15-0	CS ₂	46,5	AX	Brown	0,024	10	31	Headache, dizziness, delirium, vomiting		
Carbon monoxide	630-08-0	CO	-191	CO	Black	-	25	29	Strongly toxic, nausea, headache, dizziness		
Carbon tetrachloride	56-23-5	CCl ₄	76,8	A	Brown	60	5	31	Headache, vomiting, dizziness, liver disorders		
Carbonyl chloride	75-44-5	COCl ₂	8,3	B	Grey	2	0,1	0,4	Irritating. Pulmonary edema. Very toxic		
Chlorine	7782-50-5	Cl ₂	-34,5	B	Grey	0,03	0,5	1,5	Toxic, corrosive. Irritating the skin. Pulmonary edema		
Chlorine dioxide	10049-04-4	ClO ₂	9,9	B	Grey	0,3	0,1	0,28	Irritating the mucous membranes. Stomatitis, pharyngitis edema.		
Chloro Bromomethane	74-97-5	BrCH ₂ Cl	67,8	A	Brown	2100	200	1060	Irritating and narcotic		
1-Chloro-1nitro propane	600-25-9	C ₃ H ₆ ClNO ₂	134	A	Brown	-	2	10	Irritating		
3-Chloro-1-propyne	624-65-7	C ₃ H ₃ Cl	31,6	AX	Brown	2000	5	20	Dizziness, anesthetic action, carcinogen		
Chloroacetone	78-95-5	C ₃ H ₅ ClO	119	AP3	Brown	White	-	1 C	3,8C	Tear gas	
Chloroacetophenone (CAF)	99-91-2	C ₈ H ₇ ClO	237	AP3	Brown	White	0,102	0,05	0,32	Strong tear gas	
Chlorobenzene	108-90-7	C ₆ H ₅ Cl	131,7	A	Brown		0,98	10	46	Toxic to the central nervous system, spasms headache	
Chloroethane	75-00-3	C ₂ H ₅ Cl	12,3	AX	Brown		21	100	264	Drowsiness, apathy, visual disturbances, tremor	
Chloroform	67-66-3	CHCl ₃	61,26	AX	Brown		250	10	49	Narcotic, irritates mucous membranes, unconsciousness. Carcinogenic suspicion	
Chloropicrin	76-06-2	CCl ₃ NO ₂	112	AP3	Brown		5,4	0,1	0,67	Irritating, tear gas. Gastric disorders, vomiting	
Chloroprene	126-99-8	C ₄ H ₅ Cl	59,4	AX	Brown		-	10	36	Toxic central nervous system	
Chlorosulfonic acid	7790-94-5	HSO ₃ Cl	151	BP3	Grey	White	-	-	-	Lacrimogen, sneezing	
Cresol	1319-77-3	C ₇ H ₈ O	200	A	Brown		0,001	5	22	Ulcerates skin, causes conjunctivitis	
CS	-	-	-	ABEP3	Brown	Grey	Yellow	White	-	-	Lachrymatory
Cyanogen	57-12-5	CN-	-21	B	Grey		500	10	21	Irritating mucous membranes, headache, nausea. Mortal	
Cyanogen chloride	506-77-4	CNCl	13,1	B	Brown		2	0,3C	0,75 C	Loss and leukemia	
Cyclohexane	110-82-7	C ₆ H ₁₂	80,7	A	Brown		1,43	300	1030	Irritating to the skin	
Cyclohexanol	108-93-0	C ₆ H ₁₂ O	161,5	A	Brown		400	50	206	Narcotic. It damages kidneys, liver, blood vessels	
Cyclohexanone	108-94-1	C ₆ H ₁₀ O	155,6	A	Brown		0,48	25	100	Poor narcotic, irritant	

CHEMICAL NAME	CAS N°	FORMULA	B.P. °C	FILTER	COLOR	ODOUR THRESHOLD mg/m ³	TLV ppm	TLV mg/m ³	PHYSIOLOGICAL EFFECTS
DDT	50-29-3	C ₁₄ H ₉ Cl ₅	-	AP3	Brown White	5,07	-	1	Action on the central nervous system
Dichloro ethane	75-34-3	C ₂ H ₄ Cl ₂	83,5	A	Brown	445	100	405	Irritating
Dichloro ethylene	75-35-4	C ₂ H ₂ Cl ₂	59	AX	Brown	0,336	200	793	Irritating and narcotic
Dichloroethyl ether	111-44-4	C ₄ H ₈ Cl ₂ O	178,5	A	Brown	90	5	29	Irritating to mucous membranes. Eddema lung
Dichloro-methane	75-09-2	CH ₂ Cl ₂	39,8	AX	Brown	540	50	174	It hurts the eyes, narcotic. Headache, nausea. Carcinogenic suspicion
Dichloropropane	26638-19-7	C ₃ H ₆ Cl ₂	96,8	A	Brown	-	75	347	Dermatitis, liver damage, congestion
Dichloropropene	26952-23-8	C ₃ H ₄ Cl ₂	75	A	Brown	-	1	4,5	Strong irritant
Diethylamine	109-89-7	C ₄ H ₁₁ N	55,5	A K	Brown Green	0,085	5	15	Dangerous for the eyes
Dimethyl formamide	68-12-2	C ₃ H ₇ N ₂ O	152,8	A	Brown	300	10	30	Irritating, liver damage
Dimethyl hydrazine	57-14-7	C ₂ H ₈ N ₂	63,3	K	Green	12	0,01	0,025	Irritating, suspicious carcinogen
Dimethyl sulfate	77-78-1	C ₂ H ₆ O ₄ S	37,5	AX	Brown	-	0,1	0,52	Skin burns, conjunctivitis, paralysis. Carcinogenic suspicion
Dioxane	505-22-6	C ₄ H ₈ O ₂	101	A	Brown	0,018	25	90	Irritating to the mucous membranes. Liver problems
Ethane	74-84-0	C ₂ H ₆	-172	**		-	-	-	Asphyxiant
Ethane trichloride	79-00-5	C ₂ H ₃ Cl ₃	74,1	A	Brown	542,8	350	1910	Narcotic, irritating
Ethanol	64-17-5	C ₂ H ₆ O	78,3	A	Brown	0,34	1000	1880	Irritating eyes and respiratory tract
Ethanolamine	141-43-5	C ₂ H ₇ N ₂ O	170,5	A K	Brown	5,333	3	7,5	Irritating
Ethyl acetate	141-78-6	CH ₃ COOC ₂ H ₅	77,15	A	Brown	0,02	1440	400	Irritates mucous membranes, narcotic, anemia, leukocytosis
Ethyl bromide	74-96-4	C ₂ H ₅ Br	38,4	AX	Brown	890	5	22	Toxic narcotic. Causal conjunctivitis. Carcinogenic suspicion
Ethyl Ether	60-29-7	C ₄ H ₁₀ O	34,6	AX	Brown	0,99	400	1210	Unconsciousness, paralysis, lack of appetite. Irritating
Ethyl methyl ketone	78-93-3	C ₄ H ₈ O	79,5	A	Brown	0,738	200	590	Narcotic irritant
Ethylbenzene	100-41-4	C ₈ H ₁₀	-	A	Brown	8,7	100	434	Irritating to mucous membranes
Ethylene	74-85-1	C ₂ H ₄	-104	**		299	-	-	Asphyxiant
Ethylene diamine	107-15-3	C ₂ H ₈ N ₂	117,2	AK	Brown Green	0,48	10	25	Caustic
Ethylene oxide	75-21-8	C ₂ H ₄ O	10,7	AX	Brown	520	1	1,8	Strongly toxic, nausea, respiratory disturbances
Fire Fume -CO	-	-	-	BP3	Grey White	-	-	-	-
Fire Fume + CO	-	-	-	COP3	Black White	-	-	-	-
Formaldehyde	50-00-0	CH ₂ O	-19,5	AX	Brown	1,47	C 0,3	C0,37	Irritating, pulmonary edema. Carcinogenic
Formic acid	64-18-6	CH ₂ O ₂	100,8	A	Brown	0,005	5	9,4	Corrosive, ulcerative, irritant: mucous membranes
Freon	-	-	-	**		-	-	-	Asphyxiating, narcotic
Fumes	-	-	-	P3	White	-	-	-	-
Furfural	98-00-0	C ₅ H ₆ O ₂	161,7	A	Brown	0,24	2	7,9	Irritating. Damage to the eyes
Furfuryl alcohol	98-00-0	C ₅ H ₆ O ₂	171	A	Brown	32	10	40	Poison, high toxicity
Hexachloro cyclohexane	319-86-8	C ₆ H ₆ Cl ₆	-	AP3	Brown White	-	-	0,5	Irritating acts on the central nervous system, convulsions, edema

CHEMICAL NAME	CAS N°	FORMULA	B.P. °C	FILTER	COLOR	ODOUR THRESHOLD mg/m ³	TLV ppm	TLV mg/m ³	PHYSIOLOGICAL EFFECTS	
Hydrazine	302-01-2	N ₂ H ₄	113,5	K	Green	3	0,01	0,013	Systemic poisoning, carcinogenic suspect	
Hydrocarbons	-	-	>65	A	Brown	-	-	-	-	
Hydrogen bromide	10035-10-6	HBr	126	B	Grey	6,66	3 C	9,9 C	Highly toxic, depression, skin rash	
Hydrogen chloride	7647-01-0	HCl	-84,8	B E	Grey	7	5C	7,5C	Caustic, irritating, causes dermatitis	
Hydrogen cyanide	74-90-8	HCN	25,7	B	Grey	0,9	4,7 C	5 C	Highly toxic, headache, convulsions, dizziness	
Hydrogen fluoride	7664-39-3	HF	19,4	B	Grey	0,033	3C	2,3C	Toxic, corrosive, causes burns, inflammatory	
Hydrogen iodide	10034-85-2	HI	-35,3	B	Grey	-	-	-	Irritating the mucous membranes. Stomatitis, pharyngitis edema.	
Hydrogen phosphide	7803-51-2	PH ₃	-87	B	Grey	0,028	0,3	0,42	Irritating. Anemia, appetite, bone fragility	
Hydrogen sulfide	7783-06-4	H ₂ S	-60,4	B	Grey	0,0004	10	14	Irritating, headache, cough very toxic	
Insecticides	-	-	-	AP3	Brown	White	-	-	-	
Iodide 131 methyl	74-88-4	CH ₃ I	-	Reactor P3	Orange	White	-	-	-	
Iodine	7553-56-2	I ₂	184	B	Grey	-	0,1C	1C	It irritates the mucose. Stomatitis, pharyngitis, edema.	
Iodine 131	7553-56-2	I ₂ 131	-	Reactor P3	Orange	White	-	-	-	
Iron pentacarbonyl	13463-40-6	C ₅ FeO ₅	103	COP3	Black	White	-	0,1	0,23	Nausea, vomiting, unconsciousness. Toxic
Isoamyl alcohol	137-32-6	C ₅ H ₁₂ O	116	A	Brown	25,2	100	361	Irritating eyes and respiratory tract	
Isobutylene	115-11-7	C ₄ H ₈	-6,9	AX	Brown	54,96	-	-	Toxic corrosive. Irritating the skin. Pulmonary edema	
Isocyanates	-	-	-	AP3	Brown	White	-	-	-	
Isopropyl alcohol	67-63-0	C ₃ H ₈ O	80,3	A	Brown	7,84	400	983	Irritating , eyes damages, narcotic	
Ketene	463-51-4	C ₂ H ₂ O	-56	AX	Brown	-	0,5	0,86	Irritating, pulmonary edema	
Lindane	58-89-9	C ₆ H ₆ Cl ₆	-	**		-	-	-	Irritating, acts as a central nervous system	
Maleic anhydride	108-31-6	C ₄ H ₂ O ₃	202	A	Brown	1,84	0,25	1	Burns skin and eyes, pulmonary edema	
Mercury vapors	502-39-6	Hg	356,9	HgP3	Red	White	-	0,025	Inflammation of the mucous membranes, gingivitis, tremors	
Methane	74-82-8	CH ₄	-161,5	**		-	-	-	Asphyxiant	
2-Methoxy-ethanol	109-86-4	C ₃ H ₈ O ₂	156,4	A	Brown	White	0,288	5	24	Irritating to occurring, kidney injury.
Methyl alcohol	67-56-1	CH ₄ O	64,5	AX	Brown	13,11	200	262	Harmful nervous system, optic nerve, liver. Dermatitis, nausea	
Methyl Chloride	74-87-3	CH ₃ Cl	-23,7	**		-	50	103	Narcotic, it destroys eyes, liver, heart and central nervous system	
Methyl formate	107-31-3	C ₂ H ₄ O ₂	32	AX	Brown	500	100	246	Narcotic, irritating to the eyes and respiratory tract	
Methyl iodide	74-88-4	CH ₃ I	42,5	AX	Brown	-	2	12	Carcinogenic suspicion	
Methylene chloride	75-09-2	CH ₂ Cl ₂	39,8	AX	Brown	540	50	174	It hurts the eyes, narcotic. Headache, nausea. Carcinogenic suspicion	

CHEMICAL NAME	CAS N°	FORMULA	B.P. °C	FILTER	COLOR	ODOUR THRESHOLD mg/m ³	TLV ppm	TLV mg/m ³	PHYSIOLOGICAL EFFECTS	
Methylethyl ketone (MEK)	78-93-3	C4H8O	79,5	A	Brown	0,738	200	590	Narcotic irritant	
Mist (in general)	-	-	-	P3	White	-	-	-	-	
n-Amil acetate	628-63-7	CH3COOC5H11	149	A	Brown	0,026	713	150	Irritates eyes, nose, throat. Nausea, cough, migraine	
n-Butyl acetate	123-86-4	CH3COO(CH2)3CH3	126	A	Brown	0,009	730	150	Irritates eyes, nose, throat. Nausea, cough, migraine	
Nickel carbonyl	13463-39-3	Ni(CO)4	43	COP3	Black	White	0,21	0,05	0,12	Dizziness, gastric disorders, haemorrhage, carcinogenicity
Nitric acid	7697-37-2	HNO3	86	BP3	Grey	White	0,75	2	5,2	Toxic, corrosive, pulmonary edema
Nitrobenzene	98-95-3	C6H5NO2	210,9	A	Brown	0,024	1	5	Cyanosis, headache, dizziness, nausea	
Nitrogen Oxide	10102-44-0	NO2	21	NO P3	Blue	White	2	3	5,6	Respiratory irritation, coughing, dyspnoea, pulmonary edema
Nitroglycerin	55-63-0	C3H5N3O9	-	A	Brown	-	0,05	0,46	Headache, dizziness, cirrhosis, tremors	
NOx	-	-	-	NO P3	Blue	White	-	-	-	Respiratory irritation, coughing, dyspnoea, pulmonary edema
Petrol (vapour)			-	A	Brown	-	300	890	Eye disorders, carcinogen	
Phosphorus pentachloride	10026-13-8	PCl5	166,8	B	Grey	-	0,1	0,85	Eye damage. Irritating	
Phosphorus trichloride	7719-12-2	PCl3	74,2	B	Grey	-	0,2	1,1	Irritating to eyes, nose, throat	
Phosphoryl trichloride	10025-87-3	POCl3	105	B	Grey	-	0,1	0,63	Eye damage. Irritating	
Phthalic anhydride	85-44-9	C8H4O3	295	AP3	Brown	White	-	1	6,1	Irritating mucous membranes and cornea
Powders	-	-	-	P3	White	-	-	-	-	
Propane	74-98-6	C3H8	-41	**		1800	-	-	Anesthetic, asphyxiating	
Pyridine	110-86-1	C5H5N	115,3	A	Brown	0,009	5	16	Narcotic, irritating, headache, eczema	
Sodium hydroxide	1310-73-2	NaOH	-	P3	White	-	-	2C	Corrosive, irritant	
Spray paint	-	-	-	AP2	Brown	White	-	-	-	
Styrene	100-42-5	C8H8	146	A	Brown	0,43	20	85	Mystique, fissure, narcotic irritation	
Sulfur Chloride	10025-67-9	S2Cl2	138	BP3	Grey	White	-	1C	5,5 c	It irritates the mucous membranes of the eyes and the respiratory tract.
Sulfur dioxide	7446-09-5	SO2	-10	E	Yellow	1,17	2	5,2	Harmfull for eyes and respiratory tract, bronchitis edema	
Sulfur trioxide	7446-11-9	SO3	44,8	EP3	Yellow	White	-	-	-	Harmfull for eyes and respiratory tract, bronchitis edema
Sulfuric acid	7664-93-9	H2SO4	330	EP3	Yellow	White	1	-	-	Caustic, destroys tissues, loss of knowledge
TDI	584-84-9	C9H6N2O2	-	A	Brown	0,14	0,001	-	Bronchitis spasms dermatitis	
Tetrachloro-ethane	79-34-5	C2H2Cl4	146	A	Brown	0,2	1	-	Headache gastritis and soreness	
Tetraethyl lead	78-00-2	C8H20Pb	198	AP3	Brown	White	-	-	0,1	Insomnia, hypothermia, tremitis, headache, nausea
Toluene	95-53-4	C7H9N	110,4	A	Brown	17,55	50	188	Toxic, irritating. Carcinogenic suspicion	
Toluene diisocyanate	91-64-5	C9H6O2	118	A	Brown	3,2	0,005	0,036	Bronchitis spasms dermatitis	

CHEMICAL NAME	CAS N°	FORMULA	B.P. °C	FILTER	COLOR	ODOUR THRESHOLD mg/m ³	TLV ppm	TLV mg/m ³	PHYSIOLOGICAL EFFECTS
Trichloro ethylene	79-01-6	C ₂ HCl ₃	87,1	A	Brown	1,134	50	269	Headache gastritis and soreness
Trifluoro-methane	75-46-7	CHF ₃	-82	**		-	1000C	5600C	Gastric disorders, headache, and soreness
Turpentine oil	8006-64-2	-	160	A	Brown	560	100	55,6	Visual headache, irritating headache
Vinyl acetate	108-05-4	C ₄ H ₆ O ₂	73	A	Brown	0,36	10	35	Irritating skin, narcotic
Vinyl chloride	75-01-4	C ₂ HCl ₃	-13,4	AX	Brown	-	5	13	Dizziness, anesthetic action, carcinogen
Xylene, mixture of isomers	1330-20-7	C ₈ H ₁₀	144,4	A	Brown	0,348	100	434	Toxic, irritating. Carcinogenic suspicion

Legend

B.P. (Boiling Point)

Very important for Organic Chemicals as 65°C is the limit of filterability of those substances by a filter type A. Chemicals with lower b.p. can be retained by Type AX filters only. For some substances, it is recommended the use of compressed air breathing apparatus instead.

Filter

It indicates the filter(s) type(s) recommended for the chemical shown.

Two ** indicate that the chemical is not filterable and it is therefore necessary to use compressed air or fresh air respirators

Odour Threshold

It shows the minimum concentration detectable by humans' nose.

It is a mere indication and is taken from studies in the specialised literature.

TLV ppm (Threshold Limit Value)

The table shows the values the TLV-TWA published by the American Conference of Governmental Industrial Hygienists. They correspond to the concentration to which a worker can be exposed 8 hours a day for his entire working life without effect on his health. When the C appears, it means that it is a Ceiling Value, meaning that that concentration shall not be overpassed at any time. TLV-TWA are also commonly used when testing the breakthrough time of gas filters, i.e. the contaminant concentration in the effluent air which is considered to correspond to the exhaustion of the filter.

Physiological effects

It indicates very briefly the symptoms of chronic or acute intoxication of the concerned chemical. Sometimes reference is made to other entries either because they have similar effects or they are the same chemical referred to with different commercial or chemical names.