Alphabetical List of Industrial Gases and Toxic Substances

PSA
WHERE SAFETY MEETS TECHNOLOGY

	Substances	Formula	Filter Performance Type	Colour Mark	Remarks
A	Acetaldehyde	CH_3CHO	AX	brown	87 AX
	Acetic acid	CH_3COOH	E	yellow	also B or A
	Acetone	CH_3COCH_3	AX	brown	87 AX
	Acetonecyanhydrin	$CH_3C[OH][CN]CH_3$	A–[P3]	brown–[white]	[1]
	Acetonitrile	CH_3CN	A	brown	in presence of hydrogen cyanide: B
	Acidic gases	–	E	yellow	also B
	Acids [fuming concentrated]	–	E–[P2]	yellow–[white]	[1]
	Acrolein [2-Propenal]	CH_2CHCHO	AX	brown	87 AX
	Acrylic acid-esters	$CH_2CHCOOR$	A	brown	[1]
	Acrylonitrile	CH_2CHCN	A–[P3]	brown–[white]	in presence of hydrogen cyanide: B–P3
	Alcohols	$R \cdot OH$	A	brown	methyl alcohol: AX
	Aldehydes	$R \cdot CHO$	A or AX	brown	formaldehyde: filter B
	Allylchloride [3-chloride-1-propen]	CH_2CHCH_2Cl	AX	brown	87 AX
	2-Amino ethanol	$CH_2OHCH_2NH_2$	A	brown	[1]
	Ammonia	NH_3	K	green	[1]
	Aniline	$C_6H_5NH_2$	A–[P3]	brown–[white]	[1]
	Aqueous ammonia	NH_3H_2O	K	green	[1]
	Arsenic trioxide	As_2O_3	P3	white	in presence of arsine: 89 B/St [B2–P3]
	Arsine	AsH_3	B	grey	in presence of arsenides: 89 B/St [B2–P3]
B	Benzene	C_6H_6	A	brown	[1]
	Benzyl bromide	$C_6H_5CH_2Br$	A–[P2]	brown–[white]	also B
	Beryllium	Be	P3	white	[1]
	Bromine	Br_2	B–[P3]	grey–[white]	[1]
	Bromoform	$CHBr_3$	A	brown	[1]
	Bromomethane	CH_3Br	AX	brown	87 AX
	Butanone	$CH_3COC_2H_5$	A	brown	[1]
	Butyl acetate	$CH_3COOC_4H_9$	A	brown	[1]
	Butyl acrylate	$CH_2CHCOOC_4H_9$	A	brown	[1]
	Butyl alcohols [butanols]	C_4H_9OH	A	brown	[1]
C	Carbon black	C	P2	white	[1]
	Carbon dioxide	CO_2	[2]	–	self-contained BA
	Carbon disulfide	CS_2	B	grey	[1]
	Carbon monoxide	CO	CO	black	CO filter canister, CO filter cartridge
	Carbon oxysulfide	COS	B	grey	[1]
	Carbon tetrachloride	CCl_4	A	brown	[1]
	Caustic soda	NaOH	P2	white	[1]
	Chlorobromomethane	CH_2ClBr	AX	brown	87 AX
	Chlorine	Cl_2	B–[P3]	grey–[white]	[1]
	Chlorine dioxide	ClO_2	B	grey	[1]
	Chloromethane	CH_3Cl	[2]	–	self-contained BA
	Chloroform	$CHCl_3$	AX	brown	87 AX
	Chloroprene	$CH_2C[C]CHCH_2$	AX	brown	87 AX
	Chlorosulfonic acid	$ClSO_3H$	B–[P2]	grey–[white]	also E–P2
	Chromium oxide	Cr_2O_3, CrO_3	P3	white	[1]
	Cresols	–	A	brown	[1]
	Cyanogen chloride	ClCN	B	grey	89 B/St
	Cyclohexane	C_6H_{12}	A	brown	[1]
	Cyclohexanol	$C_6H_{11}OH$	A	brown	[1]
	Cyclohexanone	$C_6H_{10}O$	A	brown	[1]
D	DD-products [Desmodur-Desmophen]	–	A–[P2]	brown–[white]	[1]
	DDT dust	–	P3	white	also 89 B/St
	Diacetonel alcohol	$[CH_3]_2C[OH]CH_2COCH_3$	A	brown	[1]
	1,2-Dibromoethane	CH_2BrCH_2Br	A	brown	[1]
	1,2-Dichloroethane	CH_2ClCH_2Cl	A	brown	[1]

[1] All filters of the indicated performance type could be used, please see overview on page 3

[2] Use of self-contained respiratory protection necessary [compressed air breathing apparatus or airline breathing apparatus]

	Substances	Formula	Filter Performance Type	Colour Mark	Remarks
	1,2-Dichloroethylene	CHClCHCl	AX	brown	87 AX
	Dichloromethane	CH_2Cl_2	AX	brown	87 AX
	1,2-Dichloropropane	$C_3H_6Cl_2$	A	brown	[1]
	Diesel fuel	–	A	brown	[1]
	Dimethylformamide [DMF]	HCON $[CH_3]_2$	A	brown	[1]
	1,4-Dioxane	$C_4H_8O_2$	A	brown	[1]
	Dust	–	P2, P3	white	[1]
E	Epichlorhydrin	C_3H_5OCl	A–[P3]	brown–[white]	[1]
	Esters	R-COOR	A or AX	brown	[1]
	Ethanolamine	$CH_2OHCH_2NH_2$	A	brown	[1]
	Ethers	ROR	A or AX	brown	[1]
	Ethyl acetate	$CH_3COOC_2H_5$	A	brown	[1]
	Ethyl alcohol [ethanol]	C_2H_5OH	A	brown	[1]
	Ethyl benzene	$C_6H_5CH_2CH_3$	A	brown	[1]
	Ethylene dichloride	CH_2ClCH_2Cl	A	brown	[1]
	Ethylidene dichloride	CH_3CHCl_2	AX	brown	[1]
	Ethylene oxide [T-gas]	C_2H_4O	AX	brown	87 AX
	Ethyl formate	$HCOOC_2H_5$	AX	brown	87 AX
F	Formaldehyde [formalin]	HCHO	B–[P3]	grey–[white]	[1]
	Formic acid	HCOOH	E	yellow	also B
	Furfuryl alcohol	$C_5H_4O_2$	A	brown	[1]
G	Gasoline	–	A	brown	[1]
H	Halogenated hydrocarbons	R-Hal	A or AX	brown	no filter for chloromethane
			B–[P2] or	grey–[white]	if they produce HCl/H_2O
			B–[P3]	grey–[white]	
	Halogens	Hal_2	B	grey	[1]
	Hexachlorocyclohexane	$C_6H_6Cl_6$	A–[P3]	brown–[white]	also 89 B/St
	Hydrazine	N_2H_4	K–[P3]	green–[white]	[1]
	Hydrocarbons	R-H	A	brown	[1]
	Hydrochlorid acid	HCl/H_2O	E–[P2]	yellow–[white]	also B–P2
	Hydrofluoric acid [hydrogen fluoride]	HF/H_2O	E	yellow	also B
	Hydrogen bromide	HBr	E–[P2]	yellow–[white]	also B
	Hydrogen chloride	HCl	E–[P2]	yellow–[white]	also B
	Hydrogen cyanide	HCN	B	grey	[1]
	Hydrogen halogenides	HF, HCl, HBr, HJ	E–[P2]	yellow–[white]	also B–P2
	Hydrogen selenide	H_2Se	B–[P2]	grey–[white]	[1]
	Hydrogen sulfide	H_2S	B	grey	[1]
I	Insecticide [organic]	–	A–[P2]	brown–[white]	[1]
	Iodine	J_2	B–[P2]	grey–[white]	also A–P2
	Iodine [radioactive]	J_2	Reactor–[P3]	orange–[white]	[1]
	Iodomethane	CH_3J	AX	brown	87 AX
	Iodomethane [radioactive]	CH_3J	Reactor–[P3]	orange–[white]	[1]
	Iron pentacarbonyl	Fe $[CO_5]$	CO–[P3]	black–[white]	CO filter canister with particle filter P3
	Isocyanates [organic]	R-NCO	B–[P2]	grey–[white]	in case of spray and propellent gas
			B	grey	if vapours only are present
	Isopropyl alcohol	$CH_3CH\,[OH]\,CH_3$	A	brown	[1]
K	Ketenes	$R\text{-}CH_2 = CO$	[2]	–	self-contained BA
	Ketones	R-CO-R	A	brown	Acetone: AX
L	Lead fumes	Pb	P2	white	[1]
M	Maleic anhydride	$C_4H_2O_3$	A–[P2]	brown–[white]	[1]
	Mercaptans	R-SH	B	grey	[1]
	Mercury compounds	–	Hg–[P3]	red–[white]	89 Hg/St
	Mercury vapour	Hg	Hg–[P3]	red–[white]	89 Hg/St
	Metal fumes	–	P2, P3	white	[1]
	Methyl alcohol [methanol]	CH_3OH	AX	brown	87 AX
	Methyl bromide	CH_2Br	AX	brown	87 AX

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[2] Use of self-contained respiratory protection necessary [compressed air breathing apparatus or airline breathing app

	Substances	Formula	Filter Performance	Colour Mark	Remarks
	Methyl chloride	CH_3Cl	[2]	–	self-contained BA
	Methyl chloroform	CH_3CCl_3	A	brown	[1]
	Methylene chloride	CH_2Cl_2	AX	brown	87 AX
	Methyl ethyl ketone [MEK]	$CH_3COC_2H_5$	A	brown	[1]
	Methyl isobutyl ketone [MIBK]	$CH_3COC_4H_9$	A	brown	[1]
N	Nickel tetracarbonyl	$Ni[CO]_4$	CO–[P3]	black–[white]	CO filter canister and particle filter P 3
	Nitric acid	HNO_3/H_2O	NO	blue	89 NO/St
	Nitro compounds [organic]	$R\text{-}NO_2$	A	brown	[1]
	Nitrogen oxides	NO, NO_2, N_2O_5	NO	blue	89 NO/St
	Nitrous fumes	$NO, NO_2, N_2O_5, HNO_2, HNO_3$	NO	blue	89 NO/St
O	Organic nitro compounds	$R\text{-}NO_2$	A	brown	[1]
	Organic vapors, solvent	–	A, AX	brown	[1]
	Ozone	O_3	CO	black	CO filter canister
			NO	blue	89 NO/St
P	Paint sprays, vapours	–	A–[P2]	brown–[white]	[1]
	Pentachloroethane	$CHCl_2CCl_3$	A	brown	[1]
	Perchloroethylene	CCl_2CCl_2	A	brown	[1]
	Pesticides	–	A–[P2]	brown–[white]	[1]
	Petrol	–	A	brown	[1]
	Phenols	–	A	brown	[1]
	Phenylhydrazine	$C_6H_5NHNH_2$	A	brown	also K
	Phosgene	$COCl_2$	B	grey	[1]
	Phosphine	PH_3	B	grey	[1]
	Phosphorus trichloride	PCl_3	B–[P2]	grey–[white]	[1]
	Polyacrylates	–	A–[P2]	brown–[white]	[1]
	Potassium cyanide [dust]	KCN	B–[P3]	grey–[white]	[1]
	Propyl alcohol [propanol]	$CH_3CH_2CH_2OH$	A	brown	[1]
	Pyridine	C_5H_5N	A	brown	also K
Q	Quartz	SiO_2	P2	white	[1]
S	Sodium hydroxide	NaOH	P2	white	[1]
	Solvents	–	A	brown	[1]
	Stibine	SbH_3	B–[P3]	grey–[white]	[1]
	Styrene	$C_6H_5CHCH_2$	A	brown	[1]
	Sulfur compounds [burning]	$[SO_2]$	E–[P2]	yellow–[white]	[1]
	Sulfur dioxide	SO_2	E	yellow	[1]
	Sulfuric acid	H_2SO_4	B–[P2]	grey–[white]	[1]
	Sulfur monochloride	S_2Cl_2	B–[P2]	grey–[white]	[1]
	Sulfur trioxide	$[SO_3]$	P2	white	[1]
	Sulfuryl chloride	SO_2Cl_2	B	grey	[1]
T	1,1,2,2-Tetrachloroethane	$CHCl_2CHCl_2$	A	brown	[1]
	Tetrachloroethylene	CCl_2CCl_2	A	brown	[1]
	Tetrachloromethane	CCl_4	A	brown	[1]
	Tetrahydrofuran	C_4H_8O	A	brown	[1]
	T-gas [etylene oxide]	$[C_2H_4O]$	AX	brown	87 AX
	Toluene	$C_6H_5 \cdot CH_3$	A	brown	[1]
	Tribromomethane	$CHBr_3$	A	brown	[1]
	Trichloroethane [TCA]	CH_3CCl_3	A	brown	[1]
	Trichloroethylene [Tri]	C_2HCl_3	A	brown	[1]
	Trichloromethane	$CHCl_3$	AX	brown	87 AX
	Turpentine	–	A	brown	[1]
V	Vanadium pentoxide dust, fumes	V_2O_5	P2	white	[1]
	Vinyl acetate	$C_4H_6O_2$	A	brown	[1]
	Vinyl chloride	CH_2CHCl	AX	brown	87 AX
	Vinylidene chloride	CH_2CCl_2	AX	brown	87 AX
	Vinyltoluene	$CH_3C_6H_4CHCH_2$	A	brown	[1]
X	Xylenes	$CH_3C_6H_4CH_3$	A	brown	[1]
Z	Zinc oxide	ZnO	P2	white	[1]
	Zyklon [hydrogen cyanide with irritant]	–	B	grey	[1]

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