

Personal protection and sanitation (See Table 3)		Recommendations for respirator selection -- maximum concentration for use (MUC) (See Table 4)	Health hazards				
			Route	Symptoms (See Table 5)	First aid (See Table 6)		Target organs (See Table 5)
Clothing:	N.R.	NIOSH/OSHA	Inh	Irrit eyes, nose, throat,	Breath.	Resp support	Resp sys, eyes
Goggles:	N.R.	0.5 ppm: SA/SCBA	Con	nau, vomit, diarr, metallic			
Wash:	N.R.	1 25 ppm: SA/CF*		taste, garlic breath; dizz,			
Change:	N.R.	2 ppm: SCBAF/SAF		lass, ftg;			
Remove:	N.R.	§ SCBAF:PD,PP/SAF:PD,PP:ASCBA		in animals: pneunitis, liver			
		Escape: GMFS/SCBAE		damage			
Clothing:	Prevent skin freezing	NIOSH/OSHA	Inh	Apnea, coma, convuls,	Eye	Irr immed	Resp sys, eyes
Goggles:	Reason prob	100 ppm: SA*/SCBA*	Ing	irrit eyes: conj, pain,	Skin	Water flush immed	
Wash:	N.R.	250 ppm: SA/CF*	Con	lac, photo, corneal vesic,	Breath	Resp support	
Change:	N.R.	300 ppm: SCBAF/SAF		irrit resp sys, dizz; head;			
Remove:	Immed wet (flamm)	§ SCBAF:PD,PP/SAF:PD,PP:ASCBA		ftg, irrity; insom, GI dist			
		Escape: GMFS/SCBAE					
Clothing:	Repeat	NIOSH/OSHA	Inh	Irrit eyes: conj, kera, CNS	Eye:	Irr immed (15 min)	Eyes, resp sys,
Goggles:	Any poss >7%/Reason	50 mg/m ³ : PAPRD ^f	Ing	excitement; colored urine,	Skin	Water flush	skin, CNS
Wash:	prob <7%	100 mg/m ³ : HIEF/SCBAF/SAF/	Con	nau, dizz, suffocation,	Breath:	Fresh air	
Change:	Prompt contam	PAPRTHIE ^f /SAT/CF ^f		rapid breath, musc twitch,	Swallow:	Medical attention	
Remove:	After work if reason	200 mg/m ³ : SAF:PD,PP		delirium, collapse		immed	
Provide:	prob contam	§ SCBAF:PD,PP/SAF:PD,PP:ASCBA					
	Prompt non-imperv	Escape: HIEF/SCBAE					
	contam						
	>7% Eyewash						
Clothing:	Any poss >7%/Repeat	NIOSH/OSHA	Inh	Irrit eyes, nose; lac;	Eye:	Irr immed	Resp sys, eyes,
Goggles:	<7%	1 ppm: SA*/SCBA*	Ing	head; tight chest, skin	Skin:	Soap wash immed	skin, CNS, CVS
Wash:	Any poss >7%/Reason	2.5 ppm: SA/CF*	Con	burns, rash; cutaneous	Breath:	Resp support	
Change:	prob <7%	5 ppm: SCBAF/SAF		hypersensitivity	Swallow	Medical attention	
Remove:	Immed contam >7%/	10 ppm: SAF:PD,PP				immed	
Provide:	Prompt contam <7%	§ SCBAF:PD,PP/SAF:PD,PP:ASCBA					
	N.R.	Escape: GMFAGHIE/SCBAE					
	Immed non-imperv contam						
	>7%/Prompt non-imperv wet <7%						
	7%: Eyewash, quick drench						

Iodine

Chemical name, structure/formula, CAS and RTECS Nos., and DOT ID and guide Nos	Synonyms, trade names, and conversion factors	Exposure limits (TWA unless noted otherwise)	IDLH	Physical description	Chemical and physical properties		Incompatibilities and reactivities	Measurement method (See Table 1)
					MW, BP, SOL Fl.P, IP, Sp.Gr, flammability	VP, FRZ UEL, LEL		
Iron oxide dust and fume (as Fe) Fe_2O_3 1309-37-1 NO7525000 1376 37	Ferric oxide	NIOSH 5 mg/m ³ OSHA 10 mg/m ³	N.E.	Reddish-brown solid [Note: Exposure to fume may occur during the arc-welding of iron.]	MW: 159.7 BP: ? Sol: Insoluble Fl.P. NA IP: NA Sp.Gr. 5.24 Noncombustible Solid	VP: 0 mm (approx) MLT: 2664°F UEL: NA LEL: NA	Calcium hypochlorite	Filter; none; XRF; III [#7200, Welding & Brazing Fume]
Isoamyl acetate $\text{CH}_3\text{COOCH}_2\text{-CH}_2\text{CH}(\text{CH}_3)_2$ 123-92-2 NS9800000	Banana oil, Isopentyl acetate, 3-Methyl-1-butanol acetate, 3-Methylbutyl ester of acetic acid, 3-Methylbutyl ethanoate	NIOSH/OSHA 100 ppm (525 mg/m ³)	3000 ppm	Colorless liquid with a banana- like odor	MW 130.2 BP 288°F Sol 0.3% Fl.P 77°F IP ? Sp.Gr. 0.87 Class IC Flammable Liquid	VP 4 mm FRZ -109°F UEL: 7.5% LEL(212°F) 1.0%	Nitrates; strong oxidizers, alkalis & acids	Char, CS ₂ , GC/FID, III [#1450, Esters I]
Isoamyl alcohol (primary and secondary) 1: $(\text{CH}_3)_2\text{CHCH}_2\text{CH}_2\text{OH}$ 2: $(\text{CH}_3)_2\text{CHCH}(\text{OH})\text{CH}_3$ 1: 123-51-3 2: 528-75-4 1: EL5425000 1105 26	1(primary): Fermentation amyl alcohol, Fusel oil, Isobutyl carbinol, Isopentyl alcohol, 3-Methyl-1-butanol 2(secondary): 3-Methyl-2-butanol 1 ppm = 3.67 mg/m ³	NIOSH/OSHA 100 ppm (360 mg/m ³) ST 125 ppm (450 mg/m ³)	10,000 ppm	Colorless liquids with a disagree- able odor	MW: 88.2 BP: 270/234°F Sol(57°F) 2%/? Fl.P 109/ 95°F(oc) IP ?/? Sp.Gr: 0.81 (at 57°F)/0.82 primary: Class II Combustible Liquid secondary: Class IC Flammable Liquid	VP 28/1 mm FRZ: -179°F/? UEL(212°F) 9.0%/? LEL: 1.2%/?	Strong oxidizers	Char, 2-Propanol/ CS ₂ , GC/FID, III [#1402, Alcohols III]
Isobutyl acetate $\text{CH}_3\text{COOCH}_2\text{CH}(\text{CH}_3)_2$ 110-19-0 AI4025000	Isobutyl ester of acetic acid, 2-Methylpropyl acetate, 2-Methylpropyl ester of acetic acid, beta-Methylpropyl ethanoate	NIOSH/OSHA 150 ppm (700 mg/m ³)	7500 ppm	Colorless liquid with a fruity, floral odor.	MW: 116.2 BP: 243°F Sol(77°F) 0.6% Fl.P 64°F IP 9.97 eV Sp.Gr: 0.87 Class IB Flammable Liquid	VP: 13 mm FRZ: -145°F UEL: 10.5% LEL: 1.3%	Nitrates; strong oxidizers, alkalis & acids	Char; CS ₂ , GC/FID; III [#1450, Esters I]
1213 26	1 ppm = 4.83 mg/m ³							

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			Route	Symptoms (See Table 5)	First aid (See Table 6)		Target organs (See Table 5)
Clothing	N R	NIOSH 50 mg/m ³ DMFu/SA/SCBA 125 mg/m ³ PAPRDMFu/SA/CF 250 mg/m ³ HiEF/PAPRTHiE/SCBAF/ SAF/SAT/CF 5000 mg/m ³ SA PD,PP § SCBAF PD,PP/SAF PD,PP/ASCBA Escape: HiEF/SCBAE	Inh	Benign pneumoconiosis with X-ray shadows indistinguishable from fibrotic pneumoconiosis	Breath.	Resp support	Resp sys
Goggles	N R						
Wash	N R						
Change	N R						
Remove	N R						
Clothing	Repeat	NIOSH/OSHA 1000 ppm CCROV/PAPROV/SA/SCBA 2500 ppm SA CF 3000 ppm GMFOV/SCBAF/SAF § SCBAF PD,PP/SAF PD,PP/ASCBA Escape: GMFOV/SCBAE	Inh	Irrit eyes, nose, throat, narco, dermat	Eye	Irr immed	Eyes, skin, resp sys
Goggles	Reason prob		Ing		Skin	Water flush prompt	
Wash	Prompt wet		Con		Breath:	Resp support	
Change	N R				Swallow	Medical attention immed	
Remove	Immed wet (flamm)						
Clothing	Repeat	NIOSH/OSHA 1000 ppm CCRFOV/PAPROV [†] 2500 ppm SA CF [†] 5000 ppm SCBAF/SAF/GMFOV 10,000 ppm SAF PD,PP § SCBAF PD,PP/SAF PD,PP/ASCBA Escape: GMFOV/SCBAE	Inh	Irrit eyes, nose, throat, narco; head, dizz; dysp, nausea, vomit, diarr, skin cracking	Eye	Irr immed	Eyes, skin, resp sys
Goggles	Reason prob		Ing		Skin	Water flush prompt	
Wash	Prompt wet		Con		Breath	Resp support	
Change	N R				Swallow	Medical attention immed	
Remove	Prompt non-imperv wet						
Clothing	Repeat	NIOSH/OSHA 1000 ppm PAPROV [†] /CCRFOV 3750 ppm SA CF [†] 7500 ppm SCBAF/SAF/GMFOV § SCBAF PD,PP/SAF PD,PP/ASCBA Escape: GMFOV/SCBAE	Inh	Head; drow, irrit eyes, upper resp sys, skin, anes	Eye	Irr immed	Skin, eyes, resp sys
Goggles	Reason prob		Ing		Skin	Water flush prompt	
Wash	Prompt wet		Con		Breath:	Resp support	
Change	N R				Swallow	Medical attention immed	
Remove	Immed wet (flamm)						

Isobutyl acetate

Chemical name, structure/formula, CAS and RTECS Nos., and DOT ID and guide Nos.	Synonyms, trade names, and conversion factors	Exposure limits (TWA unless noted otherwise)	IDLH	Physical description	Chemical and physical properties		Incompatibilities and reactivities	Measurement method (See Table 1)
					MW, BP, SOL Fl.P, IP, Sp.Gr, flammability	VP, FRZ UEL, LEL		
Isobutyl alcohol (CH ₃) ₂ CHCH ₂ OH 78-83-1 NP9625000	IBA, Isobutanol, Isopropylcarbinol, 2-Methyl-1-propanol	NIOSH/OSHA 50 ppm (150 mg/m ³)	8000 ppm	Colorless, oily liquid with a sweet, musty odor.	MW: 74.1 BP: 227°F Sol: 10% Fl P: 82°F IP: 10.12 eV	VP: 9 mm FRZ: -162°F UEL(202°F): 10.6% LEL(123°F): 1.7%	Strong oxidizers	Char, 2-Propanol/ CS ₂ , GC/FID; III [#1401, Alcohols II]
1212 26	1 ppm = 3.08 mg/m ³				Sp.Gr. 0.80 Class IC Flammable Liquid			
Isophorone C ₉ H ₁₆ O 78-59-1 GW7700000	Isoacetophorone, 3,5,5-Trimethyl-2-cyclo- hexenone; 3,5,5-Trimethyl-2-cyclo- hexen-1-one	NIOSH/OSHA 4 ppm (23 mg/m ³)	800 ppm	Colorless to white liquid with a peppermint-like odor.	MW: 138.2 BP: 419°F Sol: 1% Fl P: 184°F IP: 9.07 eV	VP(77°F): 0.4 mm FRZ: 17°F UEL: 3.8% LEL: 0.8%	Strong oxidizers	Char(pet): CS ₂ , GC/FID, III [#2508]
	1 ppm = 5.74 mg/m ³				Sp Gr. 0.92 Class IIIA Combustible Liquid			
Isopropyl acetate CH ₃ COOCH(CH ₃) ₂ 108-21-4 AI4930000	Isopropyl ester of acetic acid, 1-Methylethyl ester of acetic acid, 2-Propyl acetate	NIOSH See Appendix D OSHA 250 ppm (950 mg/m ³) ST 310 ppm (1185 mg/m ³)	16,000 ppm	Colorless liquid with a fruity odor.	MW: 102.2 BP: 194°F Sol: 3% Fl.P: 36°F IP: 9.95 eV	VP: 42 mm FRZ: -92°F UEL: 8% LEL(100°F): 1.8%	Nitrates; strong oxidizers, alkalis & acids	Char, CS ₂ , GC/FID, II(2) [#S50]
1220 26	1 ppm = 4.25 mg/m ³				Sp Gr. 0.87 Class IB Flammable Liquid			
Isopropyl alcohol (CH ₃) ₂ CHOH 67-63-0 NT8050000	Dimethyl carbinol, IPA, Isopropanol, 2-Propanol, sec-Propyl alcohol, Rubbing alcohol	NIOSH/OSHA 400 ppm (980 mg/m ³) ST 500 ppm (1225 mg/m ³)	12,000 ppm	Colorless liquid with the odor of rubbing alcohol.	MW: 60.1 BP: 181°F Sol: Miscible Fl P: 53°F IP: 10.10 eV	VP: 33 mm FRZ: -127°F UEL(200°F): 12.7% LEL: 2.0%	Strong oxidizers, acetaldehyde, chlorine, ethylene oxide, acids, isocyanates	Char; 2-Butanol/ CS ₂ , GC/FID, III [#1400, Alcohols I]
1219 26	1 ppm = 2.50 mg/m ³				Sp Gr: 0.79 Class IB Flammable Liquid			

Personal protection and sanitation (See Table 3)		Recommendations for respirator selection — maximum concentration for use (MUC) (See Table 4)	Health hazards				
			Route	Symptoms (See Table 5)	First aid (See Table 6)		Target organs (See Table 5)
Clothing: Goggles: Wash: Change: Remove:	Repeat Reason prob Prompt wet N.R. Immed wet (flamm)	NIOSH/OSHA 500 ppm: SA*/SCBA*/CCROV* 1000 ppm: PAPROV*/CCRFOV 1250 ppm: SA:CF* 2500 ppm: GMFOV/SCBAF/SAF 8000 ppm: SAF PD,PP §: SCBAF PD,PP/SAF PD,PP ASCBA Escape: GMFOV/SCBAE	Inh Ing Con	Irrit eyes, throat, head, drow; skin irrit, cracking	Eye: Skin: Breath: Swallow:	Irr immed Water flush prompt Resp support Medical attention immed	Eyes, skin, resp sys
Clothing: Goggles: Wash: Change: Remove: Provide:	Repeat Any poss Prompt wet N.R. Prompt non-imperv wet Eyewash	NIOSH/OSHA 40 ppm: SA*/SCBA*/CCROV* 100 ppm: SA:CF*/PAPROV* 200 ppm: GMFOV/SCBAF/SAF/ PAPROV*/SA:CF* 800 ppm: SAF PD,PP §: SCBAF PD,PP/SAF PD,PP ASCBA Escape: GMFOV/SCBAE	Inh Ing Con	Irrit eyes, nose, throat, narco; derm	Eye: Skin: Breath: Swallow:	Irr immed Soap wash prompt Resp support Medical attention immed	Resp sys, skin
Clothing: Goggles: Wash: Change: Remove:	Repeat Reason prob Prompt wet N.R. Immed wet (flamm)	OSHA 6250 ppm: SA:CF [†] 12,500 ppm: SCBAF/SAF 16,000 ppm: SAF PD,PP §: SCBAF PD,PP/SAF PD,PP ASCBA Escape: GMFOV/SCBAE	Inh Ing Con	Irrit eyes, nose, skin; derm; narco	Eye: Skin: Breath: Swallow:	Irr immed Water flush prompt Resp support Medical attention immed	Eyes, skin, resp sys
Clothing: Goggles: Wash: Change: Remove:	Repeat Reason prob Prompt wet N.R. Immed wet (flamm)	NIOSH/OSHA 1000 ppm: PAPROV [‡] /CCRFOV 10,000 ppm: SA:CF [‡] 12,000 ppm: GMFOV/SCBAF/SAF §: SCBAF PD,PP/SAF PD,PP ASCBA Escape: GMFOV/SCBAE	Inh Ing Con	Mild irrit eyes, nose, throat; drow, dizz, head, dry cracking skin	Eye: Skin: Breath: Swallow:	Irr immed Water flush Resp support Medical attention immed	Eyes, skin, resp sys

Isopropyl alcohol

Chemical name, structure/formula, CAS and RTECS Nos., and DOT ID and guide Nos.	Synonyms, trade names, and conversion factors	Exposure limits (TWA unless noted otherwise)	IDLH	Physical description	Chemical and physical properties		Incompatibilities and reactivities	Measurement method (See Table 1)
					MW, BP, SOL Fl.P, IP, Sp.Gr, flammability	VP, FRZ UEL, LEL		
Isopropylamine $(\text{CH}_3)_2\text{CHNH}_2$ 75-31-0 NT8400000	2-Aminopropane, Monoisopropylamine, 2-Propylamine, sec-Propylamine	NIOSH See Appendix D OSHA 5 ppm (12 mg/m ³) ST 10 ppm (24 mg/m ³)	4000 ppm	Colorless liquid with an ammonia- like odor [Note: A gas above 91°F.]	MW: 59.1 BP: 91°F Sol: Miscible Fl.P(oc): -35°F IP: 8.72 eV	VP: 460 mm FRZ: -150°F UEL: ? LEL: ?	Strong acids, strong oxidizers	Bub; NaOH; GC/FID; II(3) [#S147]
1221 68	1 ppm = 2.46 mg/m ³				Sp.Gr: 0.69 Class IA Flammable Liquid			
Isopropyl ether $(\text{CH}_3)_2\text{CHOCH}(\text{CH}_3)_2$ 108-20-3 TZ5425000	Diisopropyl ether, Diisopropyl oxide, 2-Isopropoxy propane	NIOSH/OSHA 500 ppm (2100 mg/m ³) ACGIH 250 ppm (1050 mg/m ³) ST 310 ppm (1320 mg/m ³)	10,000 ppm	Colorless liquid with a sharp, sweet, ether-like odor	MW: 102.2 BP: 154°F Sol: 0.2% Fl.P: -18°F IP: 9.20 eV	VP: 119 mm FRZ: -76°F UEL: 7.9% LEL: 1.4%	Strong oxidizers, acids [Note: Unstable peroxides may form upon long contact of isopropyl ether with air.]	Char; CS ₂ ; GC/FID; II(3) [#S368]
1159 26	1 ppm = 4.25 mg/m ³				Sp.Gr: 0.73 Class IB Flammable Liquid			
Isopropyl glycidyl ether $\text{C}_6\text{H}_{12}\text{O}_2$ 4016-14-2 TZ3500000	1,2-Epoxy-3-isopropoxy- propane; IGE, Isopropoxymethyl oxirane	NIOSH C 50 ppm (240 mg/m ³) [15-min] OSHA 50 ppm (240 mg/m ³) ST 75 ppm (360 mg/m ³)	1000 ppm	Colorless liquid.	MW: 116.2 BP: 279°F Sol: 19% Fl.P: 92°F IP: ?	VP(77°F): 9 mm FRZ: ? UEL: ? LEL: ?	Strong oxidizers, strong caustics	Char, CS ₂ ; GC/FID; II(2) [#S77]
	1 ppm = 4.83 mg/m ³				Sp.Gr: 0.92 Class IC Flammable Liquid			
Ketene $\text{CH}_2=\text{CO}$ 463-51-4 OA7700000	Carbomethene, Ethenone, Keto-ethylene	NIOSH/OSHA 0.5 ppm (0.9 mg/m ³) ST 1.5 ppm (3 mg/m ³)	Unknown	Colorless gas with a penetrating odor	MW: 42.0 BP: -69°F Sol: Decomposes Fl.P: NA (Gas) IP: 9.61 eV	VP: >1 atm FRZ: -238°F UEL: ? LEL: ?	Water (decomposes), alcohols, ammonia [Note: Readily polymerizes.]	Bub; FeCl ₃ ; Vis; II(2) [#S92]
	1 ppm = 1.75 mg/m ³				Flammable Gas			

Personal protection and sanitation (See Table 3)		Recommendations for respirator selection — maximum concentration for use (MUC) (See Table 4)	Route	Symptoms (See Table 5)	Health hazards		
					First aid (See Table 6)	Target organs (See Table 5)	
Clothing Goggles Wash Change Remove: Provide:	Reason prob Any poss Immed wet N.R. Immed wet (flamm) Eyewash, quick drench	OSHA 125 ppm: SA, CF ^c /PAPRS ^c 250 ppm: CCRFS/GMFS/SCBAF/SAF/ PAPRS ^c 4000 ppm: SAF, PD, PP §: SCBAF, PD, PP/SAF, PD, PP, ASCBA Escape: GMFS/SCBAE	Inh Abs Inh Con	Irrit eyes, nose, throat, skin, pulm edema; vis dist; skin, eye burns, derm	Eye: Skin: Breath: Swallow.	Irr immed Water flush immed Resp support Medical attention immed	Resp sys, skin, eyes
Clothing. Goggles. Wash: Change: Remove:	Repeat Reason prob Prompt wet N.R. Immed wet	ACGIH 1000 ppm: PAPROV*/CCROV* 2500 ppm: SA*/SCBA* 6250 ppm: SA, CF ^c 10,000 ppm: SCBAF/SAF/GMFOV §: SCBAF, PD, PP/SAF, PD, PP, ASCBA Escape: GMFOV/SCBAE	Inh Ing Con	Irrit eyes, nose; resp discomfort, derm, in animals: drow, dizz, unconsciousness, narco	Eye: Skin: Breath: Swallow	Irr immed Soap wash prompt Resp support Medical attention immed	Resp sys, skin
Clothing. Goggles. Wash Change Remove:	Repeat Reason prob Prompt contam N.R. Immed wet (flamm)	NIOSH/OSHA 1000 ppm: SA, CF ^c §: SCBAF, PD, PP/SAF, PD, PP, ASCBA Escape: GMFOV/SCBAE	Inh Ing Con	Irrit eyes, upper resp sys, skin; skin sens	Eye: Skin: Breath: Swallow.	Irr immed Soap wash immed Resp support Medical attention immed	Eyes, skin, resp sys
Clothing Goggles. Wash: Change. Remove:	N.R. N.R. N.R. N.R. N.R.	NIOSH/OSHA 5 ppm: SA*/SCBA* 12.5 ppm: SA, CF ^c 25 ppm: SCBAF/SAF §: SCBAF, PD, PP/SAF, PD, PP, ASCBA Escape: GMFOV/SCBAE	Inh Con	Irrit eyes, nose, throat, lungs, pulm edema	Breath.	Resp support	Resp sys, eyes, skin

Ketene

Chemical name, structure/formula, CAS and RTECS Nos., and DOT ID and guide Nos.	Synonyms, trade names, and conversion factors	Exposure limits (TWA unless noted otherwise)	IDLH	Physical description	Chemical and physical properties		Incompatibilities and reactivities	Measurement method (See Table 1)
					MW, BP, SOL Fl.P, IP, Sp.Gr, flammability	VP, FRZ UEL, LEL		
Lead (as Pb) Pb 7439-92-1 (Metal) OF7525000 (Metal)	Metal: Lead metal, Plumbum [Note: OSHA considers "Lead" to mean metallic Pb, all inorganic Pb cmpds (Pb oxides and Pb salts), and a class of organic Pb cmpds called soaps. All other organic Pb cmpds are excluded from this definition.]	NIOSH 0.100 mg/m ³ [Air concentration to be maintained so that worker blood lead remains <0.060 mg/100 g of whole blood.] OSHA [1910.1025] 0.050 mg/m ³	700 mg/m ³	Metal. A heavy, ductile, soft gray solid.	MW: 207.2 BP: 3164°F Sol: Insoluble Fl.P. NA IP: NA	VP: 0 mm (approx) MLT: 621°F UEL: NA LEL: NA	Strong oxidizers, hydrogen peroxide, acids	Filter; HNO ₃ /H ₂ O ₂ ; AA; III [#7082]
2291 53(soluble cmpds)					Sp.Gr: 11.34 (Metal) Metal Noncombustible Solid in bulk form			
Lindane C ₆ H ₆ Cl ₆ 58-89-9 GV4900000	BHC; gamma-Hexachlorocyclohexane, HCH, 1,2,3,4,5,6-Hexachlorocyclohexane	NIOSH/OSHA 0.5 mg/m ³ [skin]	1000 mg/m ³	White to yellow, crystalline powder with a slight musty odor [pesticide]	MW: 290.8 BP: 614°F Sol: 0.001% Fl.P. NA IP: ?	VP: 0.00001 mm MLT: 235°F UEL: NA LEL: NA	Corrosive to metals	Filter/Bub; Isooctane, GC/EConD; III [#5502]
2761 55					Sp.Gr: 1.85 Noncombustible Solid, but may be dissolved in flammable liquids			
Lithium hydride LiH 7580-67-8 OJ6300000	Lithium monohydride	NIOSH/OSHA 0.025 mg/m ³	55 mg/m ³	Odorless, off-white to gray translucent, crystalline mass or white powder Sp.Gr: 0.78 Combustible Solid, but can form airborne dust clouds which may explode on contact with flame, heat, or oxidizers	MW: 7.95 BP: Decomposes Sol: Reacts Fl.P. ? IP: NA	VP: 0 mm (approx) MLT: 1256°F UEL: ? LEL: ?	Strong oxidizers, halogenated hydrocarbons, acids, water [Note: May ignite SPONTANEOUSLY in air and may reignite after fire is extinguished. Reacts with water to form hydrogen & lithium hydroxide.]	None available
1414 40 2805 40 (fused solid)								
L.P.G. C ₃ H ₈ /C ₃ H ₆ /C ₄ H ₁₀ /C ₄ H ₈ 68476-85-7 SE7545000	Bottled gas, Compressed petroleum gas, Liquefied hydrocarbon gas, Liquefied petroleum gas, LPG	NIOSH/OSHA 1000 ppm (1800 mg/m ³)	19,000 ppm [LEL]	Colorless, noncorrosive, odorless gas when pure [Note: A foul-smelling odorant is usually added. A fuel mixture of propane, propylene, butanes & butylenes. Shipped as a liquefied compressed gas.]	MW: 42 to 58 BP: > -44°F Sol: ? Fl.P. NA (Gas) IP: 10.95 eV	VP: >1 atm FRZ: ? UEL: 9.5% (Propane) 8.4% (Butane) LEL: 2.1% (Propane) 1.6% (Butane)	Strong oxidizers, chlorine dioxide	Combustible gas meter; none; none; II(2) [#S93]
1075 22					Flammable Gas			

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			Route	Symptoms (See Table 5)	First aid (See Table 6)		Target organs (See Table 5)
Clothing: Goggles: Wash: Change: Remove	Repeat Reason prob Daily N.R. Prompt non-imperv contam	OSHA 0.5 mg/m ³ : SA/HiE/SCBA 1.25 mg/m ³ : PAPRHiE/SA:CF 2.5 mg/m ³ : HiEF/PAPRTHiE/SCBAF/ SAF/SAT:CF 50 mg/m ³ : SA.PD,PP 100 mg/m ³ : SAF.PD,PP §: SCBAF.PD,PP/SAF.PD,PP:ASCBA Escape: HiEF/SCBAE	Inh Ing Con	Weak, lass, insom; facial pallor; pal eye, anor, low-wgt, malnut; constip, abdom pain, colic; anemia, gingival lead line; tremor, para wrist, ankles, encephalopathy, nephropathy; irrit eyes; hypotension	Eye: Skin: Breath: Swallow:	Irr immed Soap flush prompt Resp support Medical attention immed	GI tract, CNS, kidneys, blood, gingival tissue
Clothing: Goggles: Wash: Change: Remove: Provide:	Reason prob N.R. Immed contam After work if reason prob contam Immed non-imperv contam liq Quick drench	NIOSH/OSHA 5 mg/m ³ : CCROVDMFu/SA/SCBA 12.5 mg/m ³ : PAPROVDMFu*/SA.CF* 25 mg/m ³ : CCRFOVHiE/SCBAF/SAF/ GMFOVHiE/PAPRTOVHiE* 1000 mg/m ³ : SAF.PD,PP §: SCBAF.PD,PP/SAF.PD,PP:ASCBA Escape: GMFOVHiE/SCBAE	Inh Abs Ing Con	Irrit eyes, nose, throat; head: nau, clonic convuls, resp difficulty, cyan; aplastic anemia; skin irrit; musc spasm; in animals: liver, kidney damage	Eye: Skin: Breath: Swallow:	Irr immed Soap wash prompt Resp support Medical attention immed	Eyes, CNS, blood, liver kidneys, skin
Clothing: Goggles: Wash: Change: Remove: Provide:	Any poss sol/Repeat air >0.1 mg/m ³ Any poss Brush/Immed contam After work if any poss contam Immed contam Eyewash/>0.5 mg/m ³ quick drench	NIOSH/OSHA 0.25 mg/m ³ : SA/SCBA/HiE 0.625 mg/m ³ : SA.CF*/PAPRHiE* 1.25 mg/m ³ : HiEF/SCBAF/SAF/ PAPRTHiE* 50 mg/m ³ : SAF.PD,PP §: SCBAF.PD,PP/SAF.PD,PP:ASCBA Escape: HiEF/SCBAE	Inh Ing Con	Burns eyes, skin, burns mouth, esophagus (if ingested); nau; musc twitches; mental conf, blurred vision	Eye: Skin: Breath: Swallow:	Irr immed Water flush immed Resp support Medical attention immed	Resp sys, skin, eyes
Clothing: Goggles: Wash: Change: Remove:	Prevent skin freezing Reason prob N.R. N.R. Immed wet (flam)	NIOSH/OSHA 10,000 ppm: SA/SCBA 19,000 ppm: SA:CF/SCBAF/SAF/SAT:CF §: SCBAF.PD,PP/SAF.PD,PP:ASCBA Escape: SCBAE	Inh Con	Li-head, drow	Eye: Skin: Breath:	Irr immed Water flush immed Resp support	Resp sys, CNS

Chemical name, structure/formula, CAS and RTECS Nos., and DOT ID and guide Nos.	Synonyms, trade names, and conversion factors	Exposure limits (TWA unless noted otherwise)	IDLH	Physical description	Chemical and physical properties		Incompatibilities and reactivities	Measurement method (See Table 1)
					MW, BP, SOL Fl, P, IP, Sp Gr, flammability	VP, FRZ UEL, LEL		
Magnesium oxide fume MgO 1309-48-4 OM3850000	Magnesia fume	NIOSH See Appendix D OSHA 10 mg/m ³	N E	Finely divided white particulate dispersed in air. [Note: Exposure may occur when magnesium is burned, thermally cut, or welded upon.]	MW 40.3 BP: 6512°F Sol(86°F): 0.009% Fl.P NA IP NA Sp Gr: 3.58 Noncombustible Solid	VP: 0 mm (approx) MLT: 5072°F UEL: NA LEL: NA	Chlorine trifluoride, phosphorus pentachloride	Filter, Acid, ICP, III [#7300, Elements]
Malathion C ₁₀ H ₁₉ O ₆ PS ₂ 121-75-5 WM8400000 2783 55	S-[1,2-bis(ethoxycarbonyl)ethyl]0,0-dimethylphosphorodithioate; Diethyl (dimethoxyphosphinothioylthio) succinate	NIOSH/OSHA 10 mg/m ³ [skin]	5000 mg/m ³	Deep brown to yellow liquid with a garlic-like odor. [Note: A solid below 37°F.] [insecticide]	MW 330.4 BP: 140°F (Decomposes) Sol: 0.02% Fl P (oc) >325°F IP ? Sp Gr. 1.21 Class IIIB Combustible Liquid, but may be difficult to ignite	VP 0.00004 mm FRZ: 37°F UEL: ? LEL: ?	Strong oxidizers, magnesium, alkaline pesticides [Note: Corrosive to metals.]	Filter, Isooctane, GC/FPD, III [#5012]
Maleic anhydride C ₄ H ₂ O ₃ 108-31-6 ON3675000 2215 60	cis-Butenedioic anhydride; 2,5-Furandione, Maleic acid anhydride; Toxalic anhydride 1 ppm = 4.08 mg/m ³	NIOSH/OSHA 1 mg/m ³ (0.25 ppm)	Unknown	Colorless needles, white lumps or pellets with an irritating, choking odor	MW: 98.1 BP: 396°F Sol: Reacts Fl P: 218°F IP: 9.90 eV Sp.Gr 1.48 Combustible Solid, but may be difficult to ignite	VP: 0.2 mm MLT: 127°F UEL: 7.1% LEL: 1.4%	Strong oxidizers, water, alkalis, metals, caustics & amines above 150°F [Note: Reacts slowly with water (hydrolyzes) to form maleic acid.]	Bub, none; HPLC/UVD, II(5) [P&CAM #302]
Manganese compounds (as Mn) Mn 7439-96-5 (Metal) OO9275000 (Metal)	Metal. Colloidal manganese, Manganese-55 Synonyms of other compounds vary depending upon the specific compound	NIOSH 1 mg/m ³ ST 3 mg/m ³ OSHA C 5 mg/m ³	N E	Metal. A lustrous brittle, silvery solid	MW: 54.9 BP: 3564°F Sol Insoluble Fl P ? IP NA Sp Gr. 7.20 Combustible Solid	VP: 0 mm (approx) MLT: 2271°F UEL: ? LEL: ?	Oxidizers [Note: Will react with water or steam to produce hydrogen.]	Filter, Acid, ICP, III [#7300, Elements]

Personal protection and sanitation (See Table 3)		Recommendations for respirator selection — maximum concentration for use (MUC) (See Table 4)	Health hazards				
			Route	Symptoms (See Table 5)	First aid (See Table 6)		Target organs (See Table 5)
Clothing:	N.R.	OSHA	Inh	Irrit eyes, nose;	Breath:	Resp support	Resp sys, eyes
Goggles:	N.R.	100 mg/m ³ : DMFu/SA/SCBA	Con	metal fume fever: cough,			
Wash:	N.R.	250 mg/m ³ : SA:CF/PAPRDMFu		chest pain, flu-like fever			
Change:	N.R.	500 mg/m ³ : HiEF/SCBAF/SAF/ PAPRTHiE*					
Remove:	N.R.	5000 mg/m ³ : SAF:PD,PP					
		§: SCBAF:PD,PP/SAF:PD,PP:ASCBA					
		Escape: HiEF/SCBAE					
Clothing:	Repeat	NIOSH/OSHA	Inh	Miosis, aching eyes,	Eye:	Irr immed	Resp sys, liver,
Goggles:	Reason prob	100 mg/m ³ : SA/SCBA/CCROVDMFu	Abs	blurred vision, lac; eye,	Skin:	Soap wash prompt	blood chol, CNS,
Wash:	Prompt contam	250 mg/m ³ : SA:CF*/PAPROVDMFu*	Ing	skin irrit; saliv; anor,	Breath:	Resp support	CVS, GI tract
Change:	N.R.	500 mg/m ³ : SCBAF/SAF/CCRFOVHiE/ GMFOVHiE/PAPRTOVHiE*/ SAT:CF*	Con	nau, vomit, abdom cramps, diarr, gidd, conf, ataxia; rhin, head; tight chest, wheez, lar spasm	Swallow:	Medical attention immed	
Remove:	Prompt non-imperv contam	5000 mg/m ³ : SAF:PD,PP					
		§: SCBAF:PD,PP/SAF:PD,PP:ASCBA					
		Escape: GMFOVHiE/SCBAE					
Clothing:	Repeat	NIOSH/OSHA	Inh	Conj; photo, double vision;	Eye:	Irr immed	Eyes, resp sys,
Goggles:	Any poss	25 mg/m ³ : SA:CF ^c	Ing	nasal, upper resp irrit;	Skin:	Soap wash immed	skin
Wash:	Prompt contam	50 mg/m ³ : SCBAF/SAF	Con	bronchial asthma; derm	Breath:	Resp support	
Change:	N.R.	2000 mg/m ³ : SAF:PD,PP			Swallow:	Medical attention immed	
Remove:	Prompt non-imperv contam	§: SCBAF:PD,PP/SAF:PD,PP:ASCBA					
Provide:	Eyewash	Escape: GMFOVHiE/SCBAE					
Clothing:	N.R.	NIOSH	Inh	Parkinson's; asthenia,	Breath:	Resp support	Resp sys, CNS,
Goggles:	N.R.	10 mg/m ³ : DMXSQ~/SA/SCBA	Ing	insom, mental conf;	Swallow:	Medical attention immed	blood, kidneys
Wash:	N.R.	25 mg/m ³ : PAPRDM~/SA:CF		metal fume fever: dry			
Change:	N.R.	50 mg/m ³ : HiEF/PAPRTHiE/SCBAF/ SAF/SAT:CF		throat, cough, tight chest, dysp, rales, flu-like			
Remove:	N.R.	1000 mg/m ³ : SA:PD,PP		fever; low-back pain; vomit;			
		2000 mg/m ³ : SAF:PD,PP		mal; fig			
		§: SCBAF:PD,PP/SAF:PD,PP:ASCBA					
		Escape: HiEF/SCBAE					

Manganese compounds (as Mn)

Chemical name, structure/formula, CAS and RTECS Nos., and DOT ID and guide Nos.	Synonyms, trade names, and conversion factors	Exposure limits (TWA unless noted otherwise)	IDLH	Physical description	Chemical and physical properties		Incompatibilities and reactivities	Measurement method (See Table 1)
					MW, BP, SOL Fl.P, IR, Sp.Gr, flammability	VP, FRZ UEL, LEL		
Mercury vapor Hg 7439-97-6 OV4550000	Colloidal mercury, Metallic mercury, Quicksilver	NIOSH/OSHA 0.05 mg/m ³ [skin]	28 mg/m ³	Silver-white, heavy, odorless liquid.	MW 200.6 BP: 674°F Sol: Insoluble Fl.P: NA IP: ?	VP: 0.0012 mm FRZ: -38°F UEL: NA LEL: NA	Acetylene, ammonia, chlorine dioxide, azides, calcium (amalgam formation), sodium carbide, lithium, rubidium, copper	Hydrar; Acid; AA cold; III [#6009]
2809 60					Sp.Gr. 13.6 Noncombustible Liquid			
Mercury (organo) alkyl compounds (as Hg)	Synonyms vary depending upon the specific (organo) alkyl compound	NIOSH/OSHA 0.01 mg/m ³ ST 0.03 mg/m ³ [skin]	10 mg/m ³	Appearance and odor vary depending upon the specific (organo) alkyl compound	Properties vary depending upon the specific (organo) alkyl compound.		Strong oxidizers such as chlorine	None available
Mesityl oxide (CH ₃) ₂ C=CHCOCH ₃ 141-79-7 SB4200000	Isobutenyl methyl ketone, Isopropylideneacetone, Methyl isobutenyl ketone, 4-Methyl-3-penten-2-one	NIOSH 10 ppm (40 mg/m ³) OSHA 15 ppm (60 mg/m ³) ST 25 ppm (100 mg/m ³)	5000 ppm	Oily, colorless to light-yellow liquid with a peppermint- or honey-like odor	MW: 98.2 BP: 266°F Sol: 3% Fl.P: 87°F IP: 9.08 eV	VP: 9 mm FRZ: -52°F UEL: 7.2% LEL: 1.4%	Oxidizers, acids	Char; Methanol/ CS; GC/FID; III [#1301, Ketones II]
1229 26	1 ppm = 4.08 mg/m ³				Sp Gr(59°F) 0.86 Class IC Flammable Liquid			
Methoxychlor Cl ₃ CCH(C ₆ H ₄ OCH ₃) ₂ 72-43-5 KJ3675000	p,p'-Dimethoxydiphenyltri- chloroethane; DMDT; Methoxy-DDT, 2,2-bis(p-Methoxyphenyl)- 1,1,1-trichloroethane, 1,1,1-Trichloro-2,2-bis- (p-methoxyphenyl)ethane	NIOSH Ca See Appendix A OSHA 10 mg/m ³	Ca [N.E.]	Colorless to light yellow crystals with a slight, fruity odor. [insecticide]	MW: 345.7 BP: Decomposes Sol: Insoluble Fl.P: ? IP: ?	VP: Low MLT: 171-192°F UEL: ? LEL: ?	Oxidizers	Filter, Isooctane, GC/ECD, II(4) [#S371]
2761 55					Sp Gr(77°F): 1.41 Combustible Solid, but difficult to burn			

Personal protection and sanitation (See Table 3)		Recommendations for respirator selection — maximum concentration for use (MUC) (See Table 4)	Health hazards				
			Route	Symptoms (See Table 5)	First aid (See Table 6)		Target organs (See Table 5)
Clothing: Repeat Goggles: N.R. Wash: Prompt contam Change: After work if reason prob contam Remove: Prompt non-imperv contam		NIOSH/OSHA 0.5 mg/m ³ CCRS ¹ /SA/SCBA 1.25 mg/m ³ SA CF/PAPRS ¹ (canister) 2.5 mg/m ³ SCBAF/SAF/SAT/CF/CCRF ¹ /GMFS ¹ /PAPRTS(canister) 28 mg/m ³ SA PD,PP §: SCBAF PD,PP/SAF:PD,PP:ASCBA Escape GMFS/SCBAE	Inh Abs Con	Cough, chest pain, dysp, bron pneumitis; tremor, insom; irrity, indecision, head, fig, weak; stomatitis, salv; GI dist, anor, low-wgt; prot; irrit eyes, skin	Eye: Skin: Breath: Swallow:	Irr immed Soap wash prompt Resp support Medical attention immed	Skin, resp sys, CNS, kidneys, eyes
Clothing: Any poss Goggles: Any poss Wash: Immed contam Change: After work if any poss contam Remove: Immed non-imperv contam Provide: Eyewash, quick drench		NIOSH/OSHA 0.1 mg/m ³ SA/SCBA 0.25 mg/m ³ SA, CF 0.5 mg/m ³ SCBAF/SAF/SAT,CF 10 mg/m ³ SA:PD,PP §: SCBAF PD,PP/SAF:PD,PP ASCBA Escape SCBAE	Inh Abs Ing Con	Pares; ataxia, dysarthria; vision, hearing dist; spastic, jerky, dizz; salv; lac; nau, vomit, diarr, constip; skin burns; emotional dist	Eye: Skin: Breath: Swallow:	Irr immed Soap wash immed Resp support Medical attention immed	CNS, kidneys, eyes, skin
Clothing: Reason prob Goggles: Reason prob Wash: Immed contam Change: N.R. Remove: Immed wet (flamm) Provide: Quick drench		NIOSH 250 ppm SA,CF ¹ /PAPROV ¹ 500 ppm CCRFOV/GMFOV/SCBAF/SAF 5000 ppm: SAF,PD,PP §: SCBAF PD,PP/SAF:PD,PP:ASCBA Escape GMFOV/SCBAE	Inh Ing Con	Irrit eyes, skin, muc memb; narco, coma; in animals: CNS effects	Eye: Skin: Breath: Swallow:	Irr immed Water flush immed Resp support Medical attention immed	Eyes, skin, resp sys, CNS
Clothing: Repeat Goggles: N.R. Wash: Prompt contam Change: N.R. Remove: Prompt non-imperv contam		NIOSH ¥ SCBAF PD,PP/SAF:PD,PP:ASCBA Escape: GMFOVHiE/SCBAE	Inh Ing	None known in humans, in animals: fasc trembling, convuls; kidney, liver damage: [carc]	Skin Breath Swallow:	Soap wash Fresh air Medical attention immed	None known

Methoxychlor

Chemical name, structure/formula, CAS and RTECS Nos., and DOT ID and guide Nos.	Synonyms, trade names, and conversion factors	Exposure limits (TWA unless noted otherwise)	IDLH	Physical description	Chemical and physical properties		Incompatibilities and reactivities	Measurement method (See Table 1)
					MW, BP, SOL Fl.P, IP, Sp.Gr, flammability	VP, FRZ UEL, LEL		
Methyl acetate <chem>CH3COOCH3</chem> 79-20-9 AI9100000	Methyl ester of acetic acid, Methyl ethanoate	NIOSH/OSHA 200 ppm (610 mg/m ³) ST 250 ppm (760 mg/m ³)	10,000 ppm	Colorless liquid with a fragrant, fruity odor	MW: 74.1 BP: 135°F Sol: 30% Fl.P: 14°F IP: 10.27 eV	VP: 173 mm FRZ: -145°F UEL: 16% LEL: 3.1%	Nitrates, strong oxidizers, alkalis & acids, water [Note: Reacts slowly with water to form acetic acid & methanol]	Char; CS ₂ ; GC/FID; II(2) [#S42]
1231 26	1 ppm = 3.08 mg/m ³				Sp.Gr. 0.93 Class IB Flammable Liquid			
Methyl acetylene <chem>CH3C#CH</chem> 74-99-7 UK4250000	Allylene, Propine, Propyne, 1-Propyne	NIOSH/OSHA 1000 ppm (1650 mg/m ³)	15,000 ppm [LEL]	Colorless gas with a sweet odor [Note: A fuel that is shipped as a liquefied compressed gas]	MW: 40.1 BP: -10°F Sol: Insoluble Fl.P: NA (Gas) IP: 10.36 eV	VP: >1 atm FRZ: -153°F UEL: ? LEL: 1.7%	Strong oxidizers such as chlorine, copper alloys [Note: Can decompose explosively at 4.5 to 5.6 atmospheres of pressure.]	Bag; none; GC/FID, II(5) [#S84]
	1 ppm = 1.67 mg/m ³				Flammable Gas			
Methyl acetylene- propadiene mixture <chem>CH3C#CH/CH2=C=CH2</chem> UK4920000	MAPP gas, Methyl acetylene-allene mixture, Methyl acetylene-propadiene mixture (stabilized), Propadiene-methyl acetylene, Propyne-allene mixture, Propyne-propadiene mixture	NIOSH/OSHA 1000 ppm (1800 mg/m ³) ST 1250 ppm (2250 mg/m ³)	15,000 ppm [LEL]	Colorless gas with a strong, characteristic, foul odor. [Note: A fuel that is shipped as a liquefied compressed gas.]	MW: 40.1 BP: -36 to -4°F Sol: Insoluble Fl.P: NA (Gas) IP: ?	VP: >1 atm FRZ: -213°F UEL: ? LEL: ?	Strong oxidizers, copper alloys [Note: Forms explosive com- pounds at high pressure in contact with alloys containing more than 67% copper]	Bag; none; GC/FID, II(6) [#S85]
1060 17 (stabilized)	1 ppm = 1.67 mg/m ³				Flammable Gas			
Methyl acrylate <chem>CH2=CHCOOCH3</chem> 96-33-3 AT2800000	Methoxycarbonylethylene, Methyl ester of acrylic acid, Methyl propenoate	NIOSH/OSHA 10 ppm (35 mg/m ³) [skin]	1000 ppm	Colorless liquid with an acrid odor.	MW: 86.1 BP: 176°F Sol: 6% Fl.P: 25°F IP: 9.90 eV	VP: 65 mm FRZ: -106°F UEL: 25% LEL: 2.8%	Nitrates, oxidizers such as peroxides, strong alkalis [Note: Polymerizes easily; usually contains an inhibitor such as hydro- quinone]	Char, CS ₂ ; GC/FID, II(2) [#S38]
1919 27 (inhibited)	1 ppm = 3.58 mg/m ³				Sp Gr: 0.96 Class IB Flammable Liquid			

Personal protection and sanitation (See Table 3)		Recommendations for respirator selection — maximum concentration for use (MUC) (See Table 4)	Health hazards				
			Route	Symptoms (See Table 5)	First aid (See Table 6)		Target organs (See Table 5)
Clothing. Goggles. Wash. Change. Remove:	Repeat Reason prob Prompt wet N.R. Immed wet (flamm)	NIOSH/OSHA 1000 ppm: CCROV*/PAPROV* 2000 ppm: SA*/SCBA* 5000 ppm: SA CF* 10,000 ppm: GMFOV/SCBAF/SAF § SCBAF PD,PP/SAF PD,PP ASCBA Escape: GMFOV/SCBAE	Inh Ing Con	Irrit nose, throat, head, drow, optic atrophy	Eye: Skin: Breath. Swallow.	Irr immed Water flush prompt Resp support Medical attention immed	Resp sys, skin, eyes
Clothing. Goggles. Wash. Change. Remove:	Prevent skin freezing Reason prob N.R. N.R. Immed wet (flamm)	NIOSH/OSHA 10,000 ppm: SA/SCBA 15,000 ppm: SA CF/SCBAF/SAF § SCBAF PD,PP/SAF PD,PP ASCBA Escape: GMFOV/SCBAE	Inh	Hyperexcitability, tremors, anes, irrit resp sys	Breath:	Resp support	CNS
Clothing. Goggles. Wash. Change. Remove:	Prevent skin freezing Reason prob N.R. N.R. Immed wet (flamm)	NIOSH/OSHA 10,000 ppm: SA/SCBA 15,000 ppm: SA CF/SCBAF/SAF § SCBAF PD,PP/SAF PD,PP ASCBA Escape: GMFS/SCBAE	Inh Con	Frostbite, disorientation, excitement	Eye. Skin. Breath.	Irr immed Water flush immed Resp support	CNS, skin, eyes
Clothing. Goggles. Wash. Change. Remove. Provide:	Any poss Reason prob Immed wet N R Immed wet (flamm) Quick drench	NIOSH/OSHA 100 ppm: SA*/SCBA* 250 ppm: SA CF* 500 ppm: SCBAF/SAF 1000 ppm: SAF PD,PP § SCBAF PD,PP/SAF PD,PP ASCBA Escape: GMFOV/SCBAE	Inh Abs Con	Irrit eyes, upper resp sys, skin	Eye Skin Breath Swallow:	Irr immed Water flush immed Resp support Medical attention immed	Resp sys, eyes, skin

Methyl acrylate

Chemical name, structure/formula, CAS and RTECS Nos., and DOT ID and guide Nos.	Synonyms, trade names, and conversion factors	Exposure limits (TWA unless noted otherwise)	IDLH	Physical description	Chemical and physical properties		Incompatibilities and reactivities	Measurement method (See Table 1)
					MW, BP, SOL Fl.P, IP, Sp.Gr, flammability	VP, FRZ UEL, LEL		
Methylal <chem>CH3OCH2OCH3</chem> 109-87-5 PA8750000	Dimethoxymethane, Formal, Formaldehyde dimethylacetal, Methoxymethyl methyl ether, Methylene dimethyl ether	NIOSH/OSHA 1000 ppm (3100 mg/m ³)	15,000 ppm [LEL]	Colorless liquid with a chloroform- like odor.	MW: 76.1 BP: 111°F Sol. 33% Fl.P(oc). -26°F IP: 10.00 eV	VP: 330 mm FRZ: -157°F UEL: 13.8% LEL: 2.2%	Strong oxidizers, acids	Char; Hexane; GC/FID; III [#1611]
1234 26	1 ppm = 3.16 mg/m ³				Sp.Gr. 0.86 Class IB Flammable Liquid			
Methyl alcohol <chem>CH3OH</chem> 67-56-1 PC1400000	Carbinol, Columbian spirits, Methanol, Wood alcohol, Wood spirits	NIOSH/OSHA 200 ppm (260 mg/m ³) ST 250 ppm (325 mg/m ³) [skin]	25,000 ppm	Colorless liquid with a character- istic pungent odor.	MW: 32.1 BP: 147°F Sol. Miscible Fl.P: 52°F IP: 10.84 eV	VP: 92 mm FRZ: -144°F UEL: 36% LEL: 6.0%	Strong oxidizers	Si gel, Water; GC/FID; III [#2000, Methanol]
1230 28	1 ppm = 1.33 mg/m ³				Sp.Gr. 0.79 Class IB Flammable Liquid			
Methylamine <chem>CH3NH2</chem> 74-89-5 PF6300000	Aminomethane, Anhydrous methylamine, Aqueous methylamine, Monomethylamine	NIOSH/OSHA 10 ppm (12 mg/m ³)	100 ppm	Colorless gas with a fish- or ammonia-like odor. [Note: A liquid below 21°F Shipped as a liquefied compressed gas]	MW: 31.1 BP: 21°F Sol. Soluble Fl.P. NA (Gas) IP: 8.97 eV	VP: >1 atm FRZ: -136°F UEL: 20.7% LEL: 4.9%	Mercury, strong oxidizers, nitromethane [Note: Corrosive to copper & zinc alloys, aluminum & galvanized surfaces]	XAD-7; Reagent, HPLC/FLD; OSHA [#40]
1061 19 (anhydrous) 1235 68 (aqueous soln)	1 ppm = 1.29 mg/m ³				Sp.Gr. 0.70 (Liquid at 13°F) Flammable Gas			
Methyl (n-amyl) ketone <chem>CH3CO[CH2]4CH3</chem> 110-43-0 MJ5075000	Amyl methyl ketone, n-Amyl methyl ketone, 2-Heptanone	NIOSH/OSHA 100 ppm (465 mg/m ³) ACGIH 50 ppm (235 mg/m ³)	4000 ppm	Colorless to white liquid with a banana-like, fruity odor	MW: 114.2 BP: 305°F Sol: 0.4% Fl.P: 102°F IP: 9.33 eV	VP: 3 mm FRZ: -32°F UEL(250°F) 7.9% LEL(151°F): 1.1%	Strong acids, alkalis & oxidizers [Note: Will attack some forms of plastic.]	Char; Methanol/ CS ₂ ; GC/FID; III [#1301, Ketones II]
1110 26	1 ppm = 4.75 mg/m ³				Sp.Gr. 0.81 Class II Combustible Liquid			

Personal protection and sanitation (See Table 3)		Recommendations for respirator selection — maximum concentration for use (MUC) (See Table 4)	Health hazards				
			Route	Symptoms (See Table 5)	First aid (See Table 6)		Target organs (See Table 5)
Clothing: Goggles: Wash: Change: Remove:	Repeat Reason prob Prompt wet N.R Immed wet (flamm)	NIOSH/OSHA 10,000 ppm: SA/SCBA 15,000 ppm: SA:CF/SCBAF/SAF §: SCBAF:PD,PP/SAF:PD,PP:ASCBA Escape: GMFOV/SCBAE	Inh Ing Con	Mild irrit eyes, upper resp; anes, irrit skin	Eye: Skin: Breath: Swallow:	Irr immed Water flush prompt Resp support Medical attention immed	Skin, resp sys, CNS
Clothing: Goggles: Wash: Change: Remove:	Repeat Reason prob Prompt wet N.R Immed wet (flamm)	NIOSH/OSHA 2000 ppm: SA/SCBA 5000 ppm: SA:CF 10,000 ppm: SCBAF/SAF/SAT:CF 25,000 ppm: SAF:PD,PP §: SCBAF:PD,PP/SAF:PD,PP:ASCBA Escape: SCBAE	Inh Abs Ing Con	Eye irrit, head, drow, li-head, nau, vomit; vis dist, blindness	Eye: Skin: Breath: Swallow:	Irr immed Water flush prompt Resp support Medical attention immed	Eyes, skin, CNS, GI tract
Clothing: Goggles: Wash: Change: Remove: Provide:	Any poss liq Any poss Immed contam N.R Immed wet (flamm) Eyewash, quick drench	NIOSH/OSHA 100 ppm: SCBAF/SAF/CCRFS/GMFS/ PAPRS ^c §: SCBAF:PD,PP/SAF:PD,PP:ASCBA Escape: GMFS/SCBAE	Inh Abs Ing Con	Irrit eyes, resp sys; cough, skin, muc memb burns, derm; conj	Eye: Skin: Breath: Swallow:	Irr immed Water flush immed Resp support Medical attention immed	Resp sys, eyes, skin
Clothing: Goggles: Wash: Change: Remove:	Repeat Reason prob Prompt wet N.R Immed contam	ACGIH 500 ppm: CCROV*/SA*/SCBA* 1250 ppm: SA:CF*/PAPROV* 2500 ppm: CCRFOV/GMFOV/SCBAF/ SAF/SAT:CF* 4000 ppm: SAF:PD,PP §: SCBAF:PD,PP/SAF:PD,PP:ASCBA Escape: GMFOV/SCBAE	Inh Ing Con	Irrit eyes, muc memb; head, narco, coma; derm	Eye: Skin: Breath: Swallow:	Irr immed Soap wash Fresh air Medical attention immed	Eyes, skin, resp sys, CNS, PNS

Methyl (n-amyl) ketone

Chemical name, structure/formula, CAS and RTECS Nos., and DOT ID and guide Nos.	Synonyms, trade names, and conversion factors	Exposure limits (TWA unless noted otherwise)	IDLH	Physical description	Chemical and physical properties		Incompatibilities and reactivities	Measurement method (See Table 1)
					MW, BP, SOL Fl.P, IP, Sp.Gr, flammability	VP, FRZ UEL, LEL		
Methyl bromide <chem>CH3Br</chem> 74-83-9 PA4900000	Bromomethane, Monobromomethane	NIOSH Ca See Appendix A Reduce exposure to lowest feasible concentration OSHA 5 ppm (20 mg/m ³) [skin]	Ca [2000 ppm]	Colorless gas with a chloroform-like odor at high concentrations. [Note: A liquid below 38°F. Shipped as a liquefied compressed gas]	MW. 95.0 BP. 38°F Sol. 2% Fl.P. ? IP. 10.54 eV Sp.Gr. 1.73 (Liquid at 32°F) Flammable Gas, but only in presence of a high energy ignition source	VP. >1 atm FRZ. -137°F UEL. 16.0% LEL. 10%	Aluminum, magnesium, strong oxidizers [Note: Attacks aluminum to form aluminum trimethyl, which is SPONTANE- OUSLY flammable]	Char(pet) (2), CS ₂ , GC/FID III [#2520]
1062 55	1 ppm = 3.95 mg/m ³							
Methyl Cellosolve® <chem>CH3OCH2CH2OH</chem> 109-86-4 KL5775000	EGME, Ethylene glycol monomethyl ether, Glycol monomethyl ether, 2-Methoxyethanol	NIOSH Reduce exposure to lowest feasible concentration OSHA 25 ppm (80 mg/m ³) [skin]	* [2000 ppm]	Colorless liquid with a mild, ether-like odor	MW. 76.1 BP. 256°F Sol. Miscible Fl.P. 102°F IP. 9.60 eV Sp.Gr. 0.96 Class II Combustible Liquid	VP. 6 mm FRZ. -121°F UEL. 1.8% LEL. 14%	Strong oxidizers, caustics	Char, Methanol/ CH ₂ Cl ₂ , GC/FID, III [#1403, Alcohols IV]
1188 26	1 ppm = 3.16 mg/m ³							
Methyl Cellosolve® acetate <chem>CH3COOCH2CH2OCH3</chem> 110-49-6 KL5950000	EGMEA, Ethylene glycol monomethyl ether acetate, Glycol monomethyl ether acetate, 2-Methoxyethyl acetate	NIOSH Reduce exposure to lowest feasible concentration OSHA 25 ppm (120 mg/m ³) [skin]	* [4000 ppm]	Colorless liquid with a mild, ether-like odor	MW. 118.1 BP. 293°F Sol. Miscible Fl.P. 120°F IP. ? Sp.Gr. 1.01 Class II Combustible Liquid	VP. 2 mm FRZ. -85°F UEL. 8.2% LEL. 1.7%	Nitrates: strong oxidizers, alkalis & acids	Char, CS ₂ , GC/FID, II(2) [#539]
1189 26	1 ppm = 4.91 mg/m ³							
Methyl chloride <chem>CH3Cl</chem> 74-87-3 PA6300000	Chloromethane Monochloromethane	NIOSH Ca See Appendix A Reduce exposure to lowest feasible concentration OSHA 50 ppm (105 mg/m ³) ST 100 ppm (210 mg/m ³)	Ca [10,000 ppm]	Colorless gas with a faint, sweet odor which is not noticeable at dangerous concentrations. [Note: Shipped as a liquefied compressed gas]	MW. 50.5 BP. -12°F Sol. 0.5% Fl.P. NA (Gas) IP. 11.28 eV Flammable Gas	VP. >1 atm FRZ. -144°F UEL. 17.4% LEL. 8.1%	Chemically-active metals such as potassium, powdered aluminum, zinc & magnesium: water [Note: Reacts with water (hydrolyzes) to form hydrochloric acid]	Char(2), CH ₂ Cl ₂ , GC/FID, III [#1001]
1063 18	1 ppm = 2.10 mg/m ³							

Personal protection and sanitation (See Table 3)		Recommendations for respirator selection — maximum concentration for use (MUC) (See Table 4)	Health hazards				
			Route	Symptoms (See Table 5)	First aid (See Table 6)		Target organs (See Table 5)
Clothing: Goggles: Wash: Change: Remove: Provide:	Any poss Reason prob Immed wet N.R. Immed non-imperv contam Quick drench	NIOSH ¥: SCBAF:PD,PP/SAF:PD,PP ASCBA Escape: GMFOV/SCBAE	Inh Abs Ing Con	Head: vis dist; verti, nau, vomit, mal; hand tremor; convuls, dysp; irrit eyes; skin irrit, vesic; [carc]	Eye Skin: Breath: Swallow	Irr immed Water flush immed Resp support Medical attention immed	CNS, resp sys, skin, eyes
Clothing: Goggles: Wash: Change: Remove: Provide:	Repeat Reason prob Immed contam N.R. Immed non-imperv contam Quick drench	NIOSH ¥ SCBAF:PD,PP/SAF:PD,PP ASCBA Escape: GMFOV/SCBAE	Inh Abs Ing Con	Head, drow, weak; ataxia, tremor, som, anemic pallor, irrit eyes, [carc]	Eye Skin: Breath: Swallow	Irr immed Water flush prompt Resp support Medical attention immed	CNS, blood, skin, eyes, kidneys
Clothing: Goggles: Wash: Change: Remove:	Repeat Reason prob Prompt wet N.R. Prompt non-imperv wet	¥. SCBAF PD,PP/SAF:PD,PP ASCBA Escape: GMFOV/SCBAE	Inh Abs Ing Con	Kidney damage, brain damage, eye irrit, in animals eye, nose, throat irrit; narco	Eye: Skin: Breath: Swallow:	Irr immed Water flush prompt Resp support Medical attention immed	Kidneys, brain, CNS, PNS
Clothing Goggles Wash: Change: Remove:	Prevent wet or freezing Reason prob N.R. N.R. Immed wet (flamm)	NIOSH ¥ SCBAF:PD,PP/SAF:PD,PP ASCBA Escape: SCBAE	Inh Con	Dizz, nau, vomit, vis dist; stagger; slur speech, convuls, coma; liver, kidney damage; frostbite, [carc]	Eye, Skin: Breath:	Irr immed Water flush immed Resp support	CNS, liver, kidneys, skin

Methyl chloride

Chemical name, structure/formula, CAS and RTECS Nos., and DOT ID and guide Nos.	Synonyms, trade names, and conversion factors	Exposure limits (TWA unless noted otherwise)	IDLH	Physical description	Chemical and physical properties		Incompatibilities and reactivities	Measurement method (See Table 1)
					MW, BP, SOL Fl.P, IP, Sp.Gr, flammability	VP, FRZ UEL, LEL		
Methyl chloroform <chem>CH3CCl3</chem> 71-55-6 KJ2975000	Chloroethene; 1,1,1-Trichloroethane; 1,1,1-Trichloroethane (stabilized)	NIOSH C 350 ppm (1900 mg/m ³) [15-min] OSHA 350 ppm (1900 mg/m ³) ST 450 ppm (2450 mg/m ³)	1000 ppm	Colorless liquid with a mild, chloroform-like odor.	MW: 133.4 BP: 165°F Sol: 0.4% Fl.P: None IP: 11.00 eV Sp.Gr: 1.34 Noncombustible Liquid, however the vapor will burn.	VP: 100 mm FRZ: -23°F UEL: 12.5% LEL: 7.5%	Strong caustics; strong oxidizers, chemically-active metals such as zinc, aluminum, magnesium powders, sodium & potassium; water [Note: Reacts slowly with water to form hydrochloric acid.]	Char; CS ₂ ; GC/FID, III [#1003, Haloge- nated Hydro- carbons]
2831 74	1 ppm = 5.55 mg/m ³							
Methylcyclohexane <chem>CH3C6H11</chem> 108-87-2 GV6125000	Cyclohexylmethane, Hexahydrotoluene	NIOSH/OSHA 400 ppm (1600 mg/m ³)	10,000 ppm	Colorless liquid with a faint, benzene-like odor	MW: 98.2 BP: 214°F Sol: Insoluble Fl.P: 25°F IP: 9.85 eV Sp.Gr: 0.77 Class IB Flammable Liquid	VP(72°F): 43 mm FRZ: -196°F UEL: 6.7% LEL: 1.2%	Strong oxidizers	Char; CS ₂ ; GC/FID, III [#1500, Hydro- carbons]
2296 27	1 ppm = 4.08 mg/m ³							
Methylcyclohexanol <chem>CH3C6H10OH</chem> 25639-42-3 GW0175000	Hexahydrocresol, Hexahydromethylphenol	NIOSH/OSHA 50 ppm (235 mg/m ³)	10,000 ppm	Straw-colored liquid with a weak odor like coconut oil	MW: 114.2 BP: 311-356°F Sol: 4% Fl.P: 154°F IP: ? Sp.Gr: 0.92 Class IIIA Combustible Liquid	VP(86°F): 2 mm FRZ: -58°F UEL: ? LEL: ?	Strong oxidizers	Char; CH ₂ Cl ₂ ; GC/FID, II(4) [#S374]
2617 26	1 ppm = 4.75 mg/m ³							
o-Methylcyclohexanone <chem>CH3C6H9O</chem> 583-60-8 GW1750000	2-Methylcyclohexanone	NIOSH/OSHA 50 ppm (230 mg/m ³) ST 75 ppm (345 mg/m ³) [skin]	2500 ppm	Colorless liquid with a weak peppermint-like odor	MW: 112.2 BP: 325°F Sol: Insoluble Fl.P: 118°F IP: ? Sp.Gr: 0.93 Class II Combustible Liquid	VP: 1 mm (approx) FRZ: 7°F UEL: ? LEL: ?	Strong oxidizers	Porapak, Acetone; GC/FID, III [#2521]
2297 26	1 ppm = 4.66 mg/m ³							

Personal protection and sanitation (See Table 3)		Recommendations for respirator selection — maximum concentration for use (MUC) (See Table 4)	Health hazards				
			Route	Symptoms (See Table 5)	First aid (See Table 6)		Target organs (See Table 5)
Clothing. Goggles. Wash. Change. Remove.	Repeat Reason prob Prompt wet N.R. Prompt non-imperv wet	NIOSH/OSHA 1000 ppm. SA*/SCBA* §. SCBAF PD,PP/SAF:PD,PP ASCBA Escape. GMFOV/SCBAE	Inh Ing Con	Head, lass, CNS depres, poor equi; irrit eyes, derm, card arrhy	Eye: Skin: Breath. Swallow	Irr immed Soap wash prompt Resp support Medical attention immed	Skin, CNS, CVS, eyes
Clothing Goggles. Wash Change Remove	Repeat Reason prob Prompt wet N.R. Immed wet (flamm)	NIOSH/OSHA 4000 ppm. SA/SCBA 10,000 ppm. SA:CF/SCBAF/SAF §. SCBAF PD,PP/SAF:PD,PP:ASCBA Escape: GMFOV/SCBAE	Inh Ing Con	Li-head drow skin. nose, throat irrit	Eye: Skin. Breath. Swallow.	Irr immed Soap wash prompt Resp support Medical attention immed	Resp sys, skin
Clothing Goggles. Wash: Change: Remove:	Repeat Reason prob Prompt contam N.R. Prompt non-imperv contam	NIOSH/OSHA 500 ppm. SA*/SCBA* 1250 ppm. SA:CF* 2500 ppm. SCBAF SAF 10,000 ppm. SAF:PD,PP §. SCBAF:PD,PP/SAF:PD,PP:ASCBA Escape. GMFOV/SCBAE	Inh Abs Ing Con	Head; irrit eyes, upper resp sys; in animals: narco, liver, kidney damage	Eye: Skin. Breath: Swallow.	Irr immed Soap wash prompt Resp support Medical attention immed	Resp sys, skin, eyes, in animals CNS, liver, kidneys
Clothing: Goggles: Wash Change. Remove	Repeat Reason prob Prompt contam N R Prompt non-imperv contam	NIOSH/OSHA 500 ppm. SA*/SCBA* 1250 ppm. SA:CF* 2500 ppm. SCBAF/SAF §. SCBAF PD,PP/SAF:PD,PP:ASCBA Escape GMFOV/SCBAE	Inh Abs Ing Con	In animals: narco, irrit eyes, muc memb; derm	Eye: Skin: Breath. Swallow:	Irr immed Soap wash prompt Resp support Medical attention immed	In animals, resp sys, liver, kidneys, skin

o-Methylcyclohexanone

Chemical name, structure/formula, CAS and RTECS Nos., and DOT ID and guide Nos.	Synonyms, trade names, and conversion factors	Exposure limits (TWA unless noted otherwise)	IDLH	Physical description	Chemical and physical properties		Incompatibilities and reactivities	Measurement method (See Table 1)
					MW, BP, SOL Fl.P, IP, Sp.Gr, flammability	VP, FRZ UEL, LEL		
Methylene bisphenyl isocyanate <chem>CH2(C6H4NCO)2</chem> 101 68-8 NQ9350000	4,4'-Diphenylmethane diisocyanate, MDI; Methylene bis(4-phenyl isocyanate); Methylene di-p-phenylene ester of isocyanic acid	NIOSH 0.05 mg/m ³ (0.005 ppm) C 0.2 mg/m ³ (0.020 ppm) [10-min] OSHA C 0.2 mg/m ³ (0.02 ppm)	100 mg/m ³	White to light- yellow, odorless flakes. [Note: A liquid above 99°F]	MW: 250.3 BP: 342°F Sol: 0.2% Fl.P(oc): 396°F IP: ?	VP(104°F) 0.001 mm MLT 99°F UEL: ? LEL: ?	Strong alkalis, acids, alcohol	Bub: Acetylate: HPLC/UVD, III [#5521]
2489 53					Sp Gr(122°F): 1.19 Combustible Solid			
Methylene chloride <chem>CH2Cl2</chem> 75 09-2 PA8050000	Dichloromethane, Methylene dichloride	NIOSH Ca See Appendix A Reduce exposure to lowest feasible concentration. OSHA 500 ppm C 1000 ppm 2000 ppm (5-min max peak in any 2 hrs)	Ca [5000 ppm] ACGIH A2, 50 ppm (175 mg/m ³)	Colorless liquid with a chloroform- like odor. [Note: A gas above 104°F]	MW: 84.9 BP: 104°F Sol: 2% Fl.P: ? IP: 11.32 eV	VP: 350 mm FRZ: -139°F UEL: 22% LEL: 14%	Strong oxidizers, caustics, chemically- active metals such as aluminum, magnesium powders, potassium & sodium; concentrated nitric acid	Char(2), CS ₂ , GC/FID; III [#1005]
1593 74	1 ppm = 3.53 mg/m ³				Sp Gr: 1.33 Combustible Liquid			
Methyl formate <chem>HCOOCH3</chem> 107 31-3 LQ8925000	Methyl ester of formic acid, Methyl methanoate	NIOSH/OSHA 100 ppm (250 mg/m ³) ST 150 ppm (375 mg/m ³)	5000 ppm	Colorless liquid with a pleasant odor. [Note: A gas above 89°F]	MW: 60.1 BP: 89°F Sol: 30% Fl.P: -2°F IP: 10.82 eV	VP: 476 mm FRZ: -148°F UEL: 23% LEL: 4.5%	Strong oxidizers [Note: Reacts slowly with water to form methanol & formic acid]	Carbo-B(2); Ethyl acetate; GC/FID; II(5) [#S291]
1243 26	1 ppm = 2.50 mg/m ³				Sp.Gr: 0.98 Class IA Flammable Liquid			
5 Methyl-3-heptanone <chem>CH3CH2CO[CH2]4CH3</chem> 541 85-5 MJ7350000	Amyl ethyl ketone, Ethyl amyl ketone	NIOSH/OSHA 25 ppm (130 mg/m ³)	3000 ppm	Colorless liquid with a pungent odor.	MW: 128.2 BP: 315°F Sol: Insoluble Fl.P: 138°F IP: ?	VP: 2 mm FRZ: -70°F UEL: ? LEL: ?	Strong oxidizers	Char; Methanol/ CS ₂ ; GC/FID, III, [#1301 Ketones II]
2271 26	1 ppm = 5.33 mg/m ³				Sp.Gr: 0.82 Class II Combustible Liquid			

Personal protection and sanitation (See Table 3)		Recommendations for respirator selection — maximum concentration for use (MUC) (See Table 4)	Health hazards				
			Route	Symptoms (See Table 5)	First aid (See Table 6)		Target organs (See Table 5)
Clothing: Goggles: Wash: Change: Remove:	Reason prob Any poss Prompt contam After work if reason prob contam Prompt non-imperv contam	NIOSH 2 mg/m ³ SA*/SCBA* 5 mg/m ³ SA CF* 10 mg/m ³ SCBAF/SAF 100 mg/m ³ SCBAF PD,PP §: SCBAF PD,PP/SAF PD,PP ASCBA Escape: GMFOVHIE/SCBAE	Inh Ing Con	Irrit eyes, nose, throat; cough, pulm secretions, chest pain, dysp, asthma	Eye: Skin: Breath Swallow	Irr immed Soap wash immed Resp support Medical attention immed	Resp sys, eyes
Clothing: Goggles: Wash: Change: Remove:	Repeat Reason prob Prompt wet N.R. Prompt non-imperv wet	NIOSH ¥: SCBAF PD,PP/SAF PD,PP ASCBA Escape: GMFOV/SCBAE	Inh Ing Con	Ftg, weak, sleepiness, li-head, limbs numb, tingle; nau; irrit eyes, skin; [carc]	Eye: Skin: Breath: Swallow.	Irr immed Soap wash prompt Resp support Medical attention immed	Skin, CVS, eyes, CNS
Clothing: Goggles: Wash: Change: Remove:	Repeat Reason prob Prompt wet N.R. Immed wet (flamm)	NIOSH/OSHA 1000 ppm: SA*/SCBA* 2500 ppm: SA CF* 5000 ppm: SCBAF/SAF §: SCBAF PD,PP/SAF PD,PP ASCBA Escape: GMFOV/SCBAE	Inh Abs Ing Con	Eye, nose irrit: chest oppression, dysp; vis dist; CNS depres, in animals: pulm edema	Eye: Skin: Breath: Swallow:	Irr immed Soap wash immed Resp support Medical attention immed	Eyes, resp sys, CNS
Clothing: Goggles: Wash: Change: Remove:	Any poss Reason prob Prompt wet N.R. Prompt non-imperv wet	NIOSH/OSHA 250 ppm: SA*/SCBA* 625 ppm: SA CF*/PAPROV* 1000 ppm: CCRFOV 1250 ppm: GMFOV/SCBAF/SAF 3000 ppm: SAF PD,PP §: SCBAF PD,PP/SAF PD,PP ASCBA Escape: GMFOV/SCBAE	Inh Ing Con	Irrit eyes, muc memb, head, narco, coma, dermat	Eye: Skin: Breath Swallow.	Irr immed Water flush Resp support Medical attention immed	Eyes, skin, resp sys, CNS

5-Methyl-3-heptanone

Chemical name, structure/formula, CAS and RTECS Nos., and DOT ID and guide Nos.	Synonyms, trade names, and conversion factors	Exposure limits (TWA unless noted otherwise)	IDLH	Physical description	Chemical and physical properties		Incompatibilities and reactivities	Measurement method (See Table 1)
					MW, BP, SOL Fl.P, IP, Sp Gr, flammability	VP, FRZ UEL, LEL		
Methyl hydrazine <chem>CH3NHNH2</chem> 60-34-4 MV5600000	Monomethyl hydrazine, MMH	NIOSH Ca See Appendix A C 0.04 ppm (0.08 mg/m ³) [2-hr] OSHA C 0.2 ppm (0.35 mg/m ³) [skin]	Ca [50 ppm] ACGIH A2	Fuming, colorless liquid with an ammonia-like odor.	MW: 46.1 BP: 190°F Sol: Miscible Fl P: 17°F IP: 8.00 eV	VP(77°F): 50 mm FRZ: -62°F UEL: 92% LEL: 2.5%	Oxides of iron, copper; manganese, lead, copper alloys; porous materials such as earth, asbestos, wood & cloth, strong oxidizers such as fluorine & chlorine, nitric acid, hydrogen peroxide	Bub, Pho-acid, Vis, II(3); [#S149]
1244 28	1 ppm = 1.92 mg/m ³				Sp Gr(77°F): 0.87 Class IB Flammable Liquid			
Methyl iodide <chem>CH3I</chem> 74-88-4 PA9450000	Iodomethane, Monoiodomethane	NIOSH Ca See Appendix A 2 ppm (10 mg/m ³) [skin] OSHA 2 ppm (10 mg/m ³) [skin]	Ca [800 ppm] ACGIH A2	Colorless liquid with a pungent, ether-like odor. [Note: Turns yellow, red, or brown on expo- sure to light & moisture.]	MW: 141.9 BP: 109°F Sol: 1% Fl P: NA IP: 9.54 eV	VP(77°F): 400 mm FRZ: -88°F UEL: NA LEL: NA	Strong oxidizers [Note: Decomposes at 518°F.]	Char; Toluene, GC/FID, III [#1014]
2644 55	1 ppm = 5.90 mg/m ³				Sp Gr: 2.28 Noncombustible Liquid			
Methyl isobutyl carbinol <chem>(CH3)2CHCH2CH2-</chem> <chem>(OH)CH3</chem> 108-11-2 SA7350000	Isobutylmethylcarbinol, Methyl amyl alcohol, 4-Methyl-2-pentanol, MIBC	NIOSH/OSHA 25 ppm (100 mg/m ³) ST 40 ppm (165 mg/m ³) [skin]	2000 ppm	Colorless liquid with a mild odor	MW: 102.2 BP: 271°F Sol: 2% Fl P: 106°F IP: ?	VP: 3 mm FRZ: -130°F UEL: 5.5% LEL: 1.0%	Strong oxidizers	Char, 2-Propanol/ CS ₂ , GC/FID, III [#1402, Alcohols III]
2053 26	1 ppm = 4.25 mg/m ³				Sp Gr: 0.81 Class II Combustible Liquid			
Methyl isocyanate <chem>CH3NCO</chem> 624-83-9 NQ9450000	Methyl ester of isocyanic acid, MIC	NIOSH/OSHA 0.02 ppm (0.05 mg/m ³) [skin]	20 ppm	Colorless liquid with a sharp, pungent odor	MW: 57.1 BP: 139°F Sol(59°F): 10% Fl P: 19°F IP: 10.67 eV	VP: 348 mm MLT: -49°F UEL: 26% LEL: 5.3%	Water, oxidizers, acids, alkalis, amines, iron, tin, copper	XAD-7, CH ₃ CN, HPLC/FLD; OSHA [#54]
2480 30	1 ppm = 2.37 mg/m ³				Sp Gr: 0.96 Class IB Flammable Liquid			