

INTER-OFFICE CORRESPONDENCE

To: Distribution

Date: December 11, 1989

From: Loren Anderson

Location: General Office

Subject: IPEL Update

Attached is an updated IPEL table.

The only change from the last update is the addition of a
STEL for Methylene bis(4-cyclohexylisocyanate (HYLENE))

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From

Pls make cc's for Clyde & Max -

Ron

to Max -

You should update the APM system

Ron

12/07/89

INTERNAL PERMISSIBLE EXPOSURE LIMITS (IPELS)

CHEMICAL NAME	CODE	TWA	SOURCE	STEL	SOURCE	UNITS	NOTE
ACETALDEHYDE	ACALD	100 (OSHA)		150 (OSHA)		PPM	
ACETIC ACID	ACETIC	10 (OSHA)		15 (TLV)		PPM	
C ACETIC ANHYDRIDE	ACANH	N/A	()	5 (OSHA)		PPM	
ACETONE	ACETON	750 (OSHA)		1000 (OSHA)		PPM	
ACETONITRILE	ACCN	40 (OSHA)		60 (OSHA)		PPM	
ACROLEIN	ACRO	0.1 (OSHA)		0.3 (OSHA)		PPM	
S ACRYLIC ACID	ACRYLC	10 (OSHA)		N/A	()	PPM	
ACRYLONITRILE	AN	2 (OSHA)		10 (OSHA)		PPM	
ACTINOLITE	ACT	0.2 (OSHA)		1 (OSHA)		FML	
S ALLYL ALCOHOL	AL-ALC	2 (OSHA)		4 (OSHA)		PPM	
ALLYL CHLORIDE	ALCLOR	1 (OSHA)		2 (OSHA)		PPM	
ALLYL CHLOROFORMATE	ACF	N/A	()	N/A	()	PPM	
ALUMINUM METAL AND OXIDE	AL	10 (TLV)		N/A	()	MCM	
ALUMINUM SOLUBLE SALTS	ALSALT	2 (OSHA)		N/A	()	MCM	
AMMONIA	NH3	25 (TLV)		35 (OSHA)		PPM	
ANILINE	ANILIN	2 (OSHA)		N/A	()	PPM	
ANTHOPHYLLITE	ANT	0.2 (OSHA)		1 (OSHA)		FML	
ANTIMONY OXIDE AS SB	SB2O3	0.5 (OSHA)		0.75 (IPEL)		MCM	
ARSENIC	AS	0.01 (OSHA)		N/A	()	MCM	
ASBESTOS AMOSITE	ASBAMO	0.2 (OSHA)		1 (OSHA)		FML	
ASBESTOS CHRYSOTILE	ASBCRY	0.2 (OSHA)		1 (OSHA)		FML	
ASBESTOS CROCIDOLITE	ASBCRO	0.2 (OSHA)		1 (OSHA)		FML	
ASPHALT FUMES (PETROLEUM)	ASFALT	5 (TLV)		N/A	()	MCM	
B-ETHOXY PROPIONITRILE	EPE	5 (IPEL)		10 (IPEL)		PPM	
BARIUM SOLUBLE	BA-SOL	0.5 (OSHA)		N/A	()	MCM	
BENZENE	BENZ	1 (TLV)		5 (TLV)		PPM	
BENZYL AMINE	BENZAM	N/A	()	N/A	()	PPM	
BENZYL CHLORIDE	BENZCL	1 (OSHA)		N/A	()	PPM	
BERYLLIUM	BE	0.002 (OSHA)		0.005 (OSHA)		MCM	
BIPHENYL	BIPHEN	0.2 (OSHA)		N/A	()	PPM	
BIS-PHENOL A	BPHENA	N/A	()	N/A	()	MCM	
BORON TRICHLORIDE	BCL3	N/A	()	N/A	()	PPM	
BORON TRIFLUORIDE	BOTRIF	N/A	()	1 (TLV)		PPM	
BROMINE	BR2	0.1 (OSHA)		0.3 (TLV)		PPM	
S BROMOFORM	CHBR3	0.5 (OSHA)		N/A	()	PPM	
BUTANE	BUT-N	800 (OSHA)		N/A	()	PPM	
S BUTYL CELLOSOLVE	BCCELL	25 (TLV)		N/A	(TLV)	PPM	
BUTYL CHLOROFORMATE	BCF	N/A	()	N/A	()	PPM	
CADMIUM DUST	CADDUS	0.05 (TLV)		0.2 (TLV)		MCM	A
C CADMIUM FUME	CADFUM	N/A	()	0.05 (TLV)		MCM	
CALCIUM CARBONATE	CACO3	10 (TLV)		N/A	()	MCM	
CALCIUM HYDROXIDE	CAOH2	5 (OSHA)		N/A	()	MCM	
CALCIUM HYPOCHLORITE DUST	CAHYPO	1 (IPEL)		2 (IPEL)		MCM	
S CARBON BISULFIDE	CS2	4 (OSHA)		12 (OSHA)		PPM	A
CARBON BLACK	CARBLK	3.5 (OSHA)		N/A	()	MCM	
CARBON DIOXIDE	CO2	5000 (TLV)		30000 (OSHA)		PPM	
CARBON MONOXIDE	CO	50 (TLV)		400 (TLV)		PPM	
S CARBON TETRACHLOR	CCL4	2 (OSHA)		N/A	()	PPM	A

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INTERNAL PERMISSIBLE EXPOSURE LIMITS (IPELS)

CHEMICAL NAME	CODE	TWA	SOURCE	STEL	SOURCE	UNITS	NOTE
CHLORINE	CL2	0.5 (OSHA)		1 (OSHA)		PPM	
C CHLOROACETALDEHYDE	CLAALD	N/A ()		1 (TLV)		PPM	
S CHLOROANILINE	CLANLM	2 (TLV)	N/A	()		PPM	
CHLOROFORM	CHCL3	2 (OSHA)	N/A	()		PPM	B
CHLOROPIVALOYL CHLORIDE	CPC	0.2 (IPEL)		1 (IPEL)		PPM	
CHLOROPROPHAM	CIPC	1 (IPEL)		3 (IPEL)		PPM	
CHROMIUM OXIDE VI	CRO3	0.05 (TLV)	N/A	()		MCM	
CIS-1,2-DICHLOROETHYLENE	CIS	10 (IPEL)		25 (IPEL)		PPM	
COAL DUST RESP GT 5% QUAR	COALRQ	0.1 (OSHA)	N/A	()		MCM	C
COAL DUST RESPIRABLE	COAL-R	2 (OSHA)	N/A	()		MCM	
COAL TAR PITCH VOL.-BZSOL	CTPV	0.2 (TLV)		0.6 (IPEL)		MCM	
COPPER DUST AND MISTS	CU-DM	1 (OSHA)	N/A	()		MCM	
COPPER FUMES	CU-FUM	0.1 (OSHA)		0.3 (IPEL)		MCM	
S CRESOL	CRESOL	5 (OSHA)	N/A	()		PPM	
CRYSTAL-SILICA QTZ.RESP.	SIO2-R	0.1 (OSHA)	N/A	()		MCM	C
CRYSTAL-SILICA QTZ.TOTAL	SIO2-T	N/A ()	N/A	()		MCM	C
CYCLOHEXANE	CYHX	300 (OSHA)	N/A	()		PPM	
S CYCLOHEXANOL	CYLHEX	50 (OSHA)		75 (IPEL)		PPM	
S CYCLOHEXANONE	CYLNON	25 (OSHA)		75 (IPEL)		PPM	
CYCLOHEXENE	CYHXE	300 (TLV)	N/A	()		PPM	
CYCLOHEXENE OXIDE	CHO	10 (IPEL)		20 (IPEL)		PPM	
CYCLOHEXYL AMINE	CYHXAM	10 (OSHA)	N/A	()		PPM	
D-LIMONENE	LIMON	N/A ()	N/A	()		PPM	
DI-N-PROPYL AMINE	DNPA	N/A ()	N/A	()		PPM	
DIALLYL CARBONATE	DAC	N/A ()	N/A	()		PPM	
DIBUTYL PHTHALATE	DBUPHT	5 (OSHA)	N/A	()		MCM	
C DICHLOROACETYLENE	DCA	N/A ()		0.1 (TLV)		PPM	
DICHLOROPIVALOYL CHLORIDE	DCPC	N/A ()	N/A	()		PPM	
DIETHANOLAMINE	DIETAM	3 (OSHA)	N/A	()		PPM	
DIETHYL SULFATE	DES	0.1 (IPEL)	N/A	(IPEL)		PPM	
DIETHYL GLYC. CHLORFORMATE	DECF	1 (IPEL)		5 (IPEL)		PPM	
DIETHYLDISULFIDE	DEDS	N/A ()	N/A	()		PPM	
DIETHYLN. GLYCO. M-METHYL-E	DEGE	25 (IPEL)		50 (IPEL)		PPM	
DIETHYLTRIAMINE	DETRAM	1 (OSHA)	N/A	()		PPM	
DIISOBUTYL KETONE	DIBK	25 (OSHA)	N/A	()		PPM	
DIISOBUTYLAMINE	DIBA	N/A ()	N/A	()		PPM	
S DIISOPROPYLAMINE	DIPRNH	5 (OSHA)		10 (IPEL)		PPM	
DIMETHOXYMETHANE	DMXME	1000 (OSHA)	N/A	()		PPM	
S DIMETHYLFORMAMIDE	DMFA	10 (OSHA)	N/A	()		PPM	
DIMETHYLPHTHALATE	DMEPHT	5 (OSHA)	N/A	()		MCM	
S DIOXANE	DIOXAN	25 (OSHA)	N/A	()		PPM	
S ENDRIN	ENDRIN	0.1 (OSHA)	N/A	()		MCM	
S EPICHLOROHYDRIN	EPI	2 (OSHA)	N/A	()		PPM	
EPTC	EPTC	N/A ()	N/A	()		PPM	
ETHANOLAMINE	ETHAMN	3 (OSHA)		6 (OSHA)		PPM	
ETHYL ALCOHOL	ETOH	1000 (OSHA)	N/A	()		PPM	
S ETHYL CELLOSOLVE	ECELL	5 (IPEL)		10 (IPEL)		PPM	

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INTERNAL PERMISSIBLE EXPOSURE LIMITS (IPELS)

CHEMICAL NAME	CODE	TWA	SOURCE	STEL	SOURCE	UNITS	NOTE
ETHYL CHLORIDE	EC	200 (IPEL)		375 (IPEL)		PPM	
ETHYL CHLOROFORMATE	ECF	2 (IPEL)		5 (IPEL)		PPM	
ETHYL CHLOROPROPIONATE	ECP	N/A ()		N/A ()		PPM	
ETHYL CHLOROTHIOFORMATE	ECTF	N/A ()		N/A ()		PPM	
ETHYL ETHER	ETHER	400 (OSHA)		500 (OSHA)		PPM	
ETHYL MERCAPTAN	ETSH	0.5 (OSHA)		N/A ()		PPM	B
ETHYL PROPIONATE	ETPROP	N/A ()		N/A ()		PPM	
S ETHYLENE DIBROMIDE	EDB	0.3 (IPEL)		2.5 (IPEL)		PPM	A
ETHYLENE DICHLORIDE	EDC	1 (OSHA)		2 (OSHA)		PPM	A
ETHYLENE GLYCOL PARTIC	EGP	10 (TLV)		N/A ()		MCM	
C ETHYLENE GLYCOL VAPOR	EGV	N/A (OSHA)		50 (TLV)		PPM	
ETHYLENE OXIDE	EO	1 (OSHA)		5 (OSHA)		PPM	
S ETHYLGLYCOL ETHYL ETH ACT	EGEEA	5 (IPEL)		10 (IPEL)		PPM	
ETHYLHEXYL ALCOHOL	2EH0H	N/A ()		N/A ()		PPM	
ETHYLHEXYLPEROXYDICARBON.	EHPDC	1 (IPEL)		3 (IPEL)		PPM	
FLUORIDE AS F	FLORID	2.5 (OSHA)		N/A ()		MCM	
FORMALDEHYDE	FORMAL	1 (OSHA)		2 (OSHA)		PPM	
S FURFURAL ALCOHOL	FURALC	10 (OSHA)		15 (OSHA)		PPM	
GLYCIDOL (EPOXYPROPANOL)	GLYCDL	5 (IPEL)		10 (IPEL)		PPM	
GRAPHITE RESPIRABLE	GRAPHT	2.5 (TLV)		N/A ()		MCM	
HEXACHLOROETHANE	HEX	1 (TLV)		N/A ()		PPM	
HEXAMETHYLENEDIISOCYANATE	HDI	0.005 (TLV)		N/A ()		PPM	
HYDROCARBONS	HC	N/A ()		N/A ()		PPM	
C HYDROGEN BROMIDE	HBR	N/A ()		3 (OSHA)		PPM	
C HYDROGEN CHLORIDE (ACID)	HCL	N/A ()		5 (OSHA)		PPM	
HYDROGEN FLUORIDE	HF	3 (OSHA)		N/A ()		PPM	
HYDROGEN PEROXIDE	H2O2	1 (OSHA)		N/A ()		PPM	
HYDROGEN SULFIDE	H2S	10 (OSHA)		15 (OSHA)		PPM	A
HYDROQUINONE	HQ	2 (OSHA)		N/A ()		MCM	
C IODINE	I2	N/A ()		0.1 (TLV)		PPM	
IRON OXIDE FUME	FE0XFU	5 (TLV)		N/A ()		MCM	
ISOBUTANOL	IBL	50 (OSHA)		N/A ()		PPM	
ISOBUTYLCHLOROFORMATE	IBCF	N/A ()		N/A ()		PPM	
ISOPHORONE	ISOPHO	4 (OSHA)		N/A ()		PPM	
ISOPHORONE DIISOCYANATE	IPDI	0.005 (OSHA)		0.02 (OSHA)		PPM	
ISOPROPYL ACETATE	IPRACT	250 (OSHA)		310 (TLV)		PPM	
ISOPROPYL ALCOHOL	ISOALC	400 (OSHA)		500 (OSHA)		PPM	
ISOPROPYL CARBANILATE	IPC	10 (IPEL)		25 (IPEL)		PPM	
ISOPROPYL CHLOROFORMATE	IPCF	1 (IPEL)		5 (IPEL)		PPM	
ISOPROPYL PERCARBONATE	IPP	0.1 (IPEL)		0.3 (IPEL)		PPM	
S LEAD-ORGANIC	PBORG	0.075 (OSHA)		0.3 (IPEL)		MCM	
LEAD-PARTICULATE	PBPART	0.05 (OSHA)		N/A ()		MCM	
LIQUIFIED PETROLEUM GAS	LPG	1000 (OSHA)		N/A ()		PPM	
M-DICHLOROBENZENE	MDCB	N/A ()		N/A ()		PPM	
S M-ETHYLGLYCOL M-METHYL ET	MEGE	2 (IPEL)		5 (IPEL)		PPM	
MALEIC ANHYDRIDE	MALANH	0.25 (OSHA)		N/A ()		PPM	
MANGANESE FUME	MANGFU	1 (TLV)		3 (TLV)		MCM	

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INTERNAL PERMISSIBLE EXPOSURE LIMITS (IPELS)

CHEMICAL NAME	CODE	TWA	SOURCE	STEL	SOURCE	UNITS	NOTE
S MERCURY	HG	0.05 (OSHA)	N/A	()		MCM	
S METHANOL	METHOL	200 (OSHA)		250 (OSHA)		PPM	
METHBISCYCLOHEXISOCYANATE	HYLENE	0.005 (TLV)		0.01 (OSHA)		PPM	
METHY B PHENYL ISOCYANATE	MDI	0.005 (TLV)		0.02 (OSHA)		PPM	
S METHYL ACRYLATE	METACR	10 (OSHA)	N/A	()		PPM	
METHYL CHLORIDE	MECL	50 (OSHA)		100 (OSHA)		PPM	A
METHYL CHLOROFORM	MC	350 (TLV)		450 (TLV)		PPM	
METHYL CHLOROFORMATE	MCF	1 (IPEL)		2 (IPEL)		PPM	
METHYL CYCLOHEXANE	MECYHX	400 (OSHA)	N/A	()		PPM	
METHYL ETHYL KETONE	MEK	200 (OSHA)		250 (IPEL)		PPM	
METHYL ISOBUTYR KETONE	MIBK	50 (OSHA)		75 (OSHA)		PPM	
S METHYL ISOCYANATE	MI	0.02 (OSHA)	N/A	()		PPM	
METHYL MERCAPTAN	MESH	0.5 (OSHA)	N/A	()		PPM	B
S METHYLCYCLOPN-D-MN-TRICBL	MMT-MN	0.1 (IPEL)		0.3 (IPEL)		PPM	
METHYLENE CHLORIDE	METHCL	50 (TLV)	N/A	()		PPM	A
MOLYBDENUM	MO	5 (OSHA)	N/A	()		MCM	
MONO-CHLOROBENZENE	MCBN	75 (OSHA)		150 (IPEL)		PPM	
MONOCHLOROACETYLENE	MCA	N/A	()	N/A	()	PPM	
S MORPHOLINE	MORPH	20 (OSHA)		30 (OSHA)		PPM	
S,C N-BUTANOL	N-BUOH	N/A	(OSHA)	50 (TLV)		PPM	
N-HEPTANE	NHPTAN	400 (TLV)		500 (TLV)		PPM	
N-HEXANE	HX-N	50 (TLV)	N/A	()		PPM	
S N-PROPANOL	NPL	200 (OSHA)		250 (OSHA)		PPM	
N-PROPYL CHLOROFORMATE	NPCF	1 (IPEL)		5 (IPEL)		PPM	
NICKEL METAL	NICKEL	1 (OSHA)	N/A	()		MCM	
NITRIC ACID	HNO3	2 (OSHA)		4 (OSHA)		PPM	
NITRIC OXIDE	NO	25 (OSHA)	N/A	()		PPM	
NITROGEN DIOXIDE	NO2	N/A	()	1 (OSHA)		PPM	B
NITROMETHANE	NITMET	100 (OSHA)	N/A	()		PPM	
NOISE	NOISE	90 (OSHA)	N/A	()		OTH	
NORM.BUTYL ACETATE	NBA	150 (OSHA)		200 (OSHA)		PPM	
NUISANCE DUST	DUSTNU	10 (TLV)	N/A	()		MCM	
NUISANCE DUST-RESPIRABLE	DUSTNR	5 (TLV)	N/A	()		MCM	
OIL MIST	OILMST	5 (OSHA)		10 (TLV)		MCM	
C ORTHO-DICHLOROBENZENE	ODCB	N/A	(OSHA)	50 (TLV)		PPM	
OXALIC ACID	OXACD	1 (OSHA)		2 (OSHA)		MCM	
OZONE	O3	N/A	()	0.1 (TLV)		PPM	
P_XYLENE DIISOCYANATE	PXDI	N/A	()	N/A	()	PPM	
PALLADIUM	PALLAD	0.1 (IPEL)		0.3 (IPEL)		MCM	
PARA-DICHLOROBENZENE	PDCB	75 (OSHA)		100 (IPEL)		PPM	
S PENTACHLOROPHENOL	PCP	0.5 (OSHA)	N/A	()		MCM	
PERCHLOROETHYLENE	PER	25 (OSHA)		100 (IPEL)		PPM	A
S PHENOL	PHENOL	5 (OSHA)	N/A	()		PPM	
PHENYL CHLOROFORMATE	PCF	N/A	()	N/A	()	PPM	
PHOSGENE	PHOSGE	0.1 (OSHA)		0.3 (IPEL)		PPM	
PHOSPHORIC ACID	HPO3	1 (TLV)		3 (TLV)		MCM	
PIVALOYL CHLORIDE	PVCL	0.2 (IPEL)		1 (IPEL)		PPM	

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INTERNAL PERMISSIBLE EXPOSURE LIMITS (IPELS)

CHEMICAL NAME	CODE	TWA	SOURCE	STEL	SOURCE	UNITS	NOTE
PLATINUM	PT	1 (OSHA)	N/A	()		MCM	
S POLYCHLOR BIPHENYLS 42%CL	PCB-42	1 (TLV)	N/A	()		MCM	
S POLYCHLOR BIPHENYLS 54%CL	PCB-54	0.5 (TLV)	N/A	()		MCM	
C POTASSIUM HYDROXIDE	KOH	N/A (OSHA)		2 (TLV)		MCM	
POTASSIUM HYDROXIDE	KOH	N/A ()		2 (OSHA)		MCM	
PPG 1013	1013	N/A ()	N/A	()		UCM	
S PROPARGYL ALCOHOL	PRGOH	1 (OSHA)	N/A	()		PPM	
PROPYLENE OXIDE	PO	20 (OSHA)	N/A	()		PPM	
PROPYLENE TRICHLORIDE	PTCL2	5 (IPEL)		10 (IPEL)		PPM	
PYRIDINE	PYRDIN	5 (OSHA)	N/A	()		PPM	
RUTHENIUM	RUTH	N/A ()	N/A	()		MCM	
SEC-BUTYL ALCOHOL	BU2ALC	100 (OSHA)		150 (TLV)		PPM	
SEC-BUTYL CHLOROFORMATE	SBCF	N/A ()	N/A	()		PPM	
SILICA-CRISTOBALITE-RESP	SIO2-C	0.05 (TLV)	N/A	()		MCM	
SILICON CARBIDE	SIC	10 (OSHA)	N/A	()		MCM	
SILVER METAL SOLUBLE CMPD	AG	0.01 (OSHA)	N/A	()		MCM	
C SODIUM AZIDE	NAN3	N/A (OSHA)		0.1 (TLV)		PPM	
C SODIUM HYDROXIDE	NAOH	N/A (OSHA)		2 (TLV)		MCM	
STODDARD SOLVENT	STDSOL	100 (OSHA)	N/A	()		PPM	
STYRENE MONOMER	STYREN	50 (OSHA)		100 (OSHA)		PPM	
SUCROSE	SUCROS	10 (TLV)	N/A	()		MCM	
SULFUR CHLORIDE	S2CL2	N/A ()	N/A	()		PPM	
SULFUR DIOXIDE	SO2	2 (OSHA)		5 (OSHA)		PPM	
SULFURIC ACID	H2SO4	1 (OSHA)		2 (IPEL)		MCM	
S SYM-TETRACHLOROETHANE	SYM	1 (OSHA)	N/A	()		PPM	
SYN PRECIP SILICA-RESP	SPS-R	5 (IPEL)	N/A	()		MCM	
SYN PRECIP SILICA-TOTAL	AM-SIL	6 (OSHA)	N/A	()		MCM	
TANTALUM	TA	5 (TLV)	N/A	()		MCM	
C TERPHENYLS	TERPH	N/A ()		0.5 (HA)		PPM	
TERT-BUTYL ALCOHOL	BUOH-T	100 (OSHA)		150 (OSHA)		PPM	
TETRAHYDROFURAN	THF	200 (OSHA)		250 (OSHA)		PPM	
TIN-INORG.CMPS.-NOT OXIDE	TIN-IN	2 (OSHA)	N/A	()		MCM	
TITANIUM DIOXIDE	TIO2	10 (OSHA)	N/A	()		MCM	
TOLUENE	TOLUEN	100 (OSHA)		150 (OSHA)		PPM	A
TOLUENE 2,4 DIISOCYANATE	TDI	0.005 (OSHA)		0.02 (OSHA)		PPM	
TOTAL HYDROCARBONS	TOT-HC	N/A ()	N/A	()		PPM	
TOTAL OXIDANTS AS OZONE	TOT-OX	0.1 (IPEL)		0.3 (IPEL)		PPM	
TRANS-1,2DICHLOROETHYLENE	TRANS	10 (IPEL)		25 (IPEL)		PPM	
TREMOLITE	TRE	0.2 (OSHA)		1 (OSHA)		FML	
TRICHLOROETHYLENE	TRI	50 (OSHA)		200 (OSHA)		PPM	A
C TRICHLOROFLUOROMETHANE	FREON	N/A ()		1000 (TLV)		PPM	
TRIOETHOCRESYL PHOSPHATE	TOCP	0.1 (OSHA)	N/A	()		MCM	
TUNGSTEN INSOLUBLE	TUNG	5 (OSHA)		10 (OSHA)		MCM	
TURPENTINE	TURPEN	100 (OSHA)	N/A	()		PPM	
UNSYM-TETRACHLOROETHANE	UNSYM	5 (IPEL)		10 (IPEL)		PPM	
VINYL ACETATE	V-ACET	10 (OSHA)		20 (OSHA)		PPM	
VINYL BROMIDE	VBR	1 (IPEL)		5 (IPEL)		PPM	

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INTERNAL PERMISSIBLE EXPOSURE LIMITS (IPELS)

CHEMICAL NAME	CODE	TWA	SOURCE	STEL	SOURCE	UNITS	NOTE
VINYL CHLORIDE	VCM	1 (OSHA)		5 (OSHA)		PPM	
VINYL TOLUENE	VTOL	50 (TLV)		100 (TLV)		PPM	
VINYLDENE CHLORIDE	VDC	1 (OSHA)		10 (IPEL)		PPM	
WELDING FUME-TOTAL	WELDFU	5 (OSHA)		10 (IPEL)		MCM	
WELDING FUME-TOTAL	WELDFU	5 (OSHA)		10 (TLV)		MCM	
X-RADIATION	X-RAYS	VAR	(TLV)	VAR	(TLV)	OTH	
XYLENE	XYLENE	100 (OSHA)		150 (OSHA)		PPM	
ZINC CHLORIDE FUME	ZNCLFU	1 (OSHA)		2 (OSHA)		MCM	
ZINC OXIDE FUME	ZNOF	5 (OSHA)		10 (OSHA)		MCM	
ZINC STEARATE	ZNSTER	10 (OSHA)		20 (TLV)		MCM	
1,1 DICHLOROETHANE	DCE	10 (IPEL)		25 (IPEL)		PPM	
S 1,1 DIMETHYLHYDRAZINE	DMEHYZ	0.5 (OSHA)		N/A	()	PPM	
S 1,1,2 TRICHLOROETHANE	TCE	5 (IPEL)		10 (IPEL)		PPM	
1,2-BUTYLENE OXIDE	BLM	5 (IPEL)		10 (IPEL)		PPM	
1,2,3-TRICHLOROBENZENE	123TCB	N/A	()	N/A	()	PPM	
C 1,2,4-TRICHLOROBENZENE	TCB	N/A	()	5 (OSHA)		PPM	
1,3-BUTADIENE	BUDIEN	10 (TLV)		N/A	(TLV)	PPM	
1,3-DIOXOLANE	DOL	25 (IPEL)		50 (IPEL)		PPM	
2-ETHYLHEXYLCHLOROFORMATE	EHCF	1 (IPEL)		5 (IPEL)		PPM	
2-NITROPROPANE	2-NPRO	10 (OSHA)		N/A	()	PPM	
2,6 DITERTBUTYL-P-CRESOL	DTBPC	10 (TLV)		N/A	()	MCM	

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