

Safety Data Sheet SIA0182.0 Date of issue: 01/13/2015 Version: 1.0

SECTION 1: Identification of the sub	stance/mixture and of the company/undertaking
1.1. Product identifier	
Product form	: Substance
Physical state	: Liquid
Substance name	: ACRYLOXYMETHYLTRIMETHOXYSILANE
Product code	: SIA0182.0
Formula	: C7H14O5Si
Synonyms	: (TRIMETHOXYSILYLMETHYL)ACRYLATE
Chemical family	: ORGANOMETHOXYSILANE
	tance or mixture and uses advised against
Use of the substance/mixture	: Chemical intermediate For research and industrial use only
1.3. Details of the supplier of the safety	data sheet
GELEST, INC.	
11 East Steel Road Morrisville, PA 19067	
USA T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 /	AM - 5:30 PM FST
info@gelest.com - www.gelest.com	
1.4. Emergency telephone number	
Emergency number	: CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)
SECTION 2: Hazards identification	
2.1. Classification of the substance or m	lixture
Classification (GHS-US)	
Flam. Liq. 4 H227 Skin Irrit. 2 H315 Eye Dam. 1 H318 Skin Sens. 1 H317	
Full text of H-phrases: see section 16	
2.2. Label elements	
GHS-US labeling	
Hazard pictograms (GHS-US)	
	GHS05 GHS07
Signal word (GHS-US)	: Danger
Hazard statements (GHS-US)	 H227 - Combustible liquid H315 - Causes skin irritation H317 - May cause an allergic skin reaction H318 - Causes serious eye damage
Precautionary statements (GHS-US)	 P280 - Wear protective gloves/protective clothing/eye protection/face protection P261 - Avoid breathing vapors P264 - Wash hands thoroughly after handling P210 - Keep away from heat, open flames, sparks No smoking P272 - Contaminated work clothing must not be allowed out of the workplace P302+P352 - If on skin: Wash with plenty of water P333+P313 - If skin irritation or rash occurs: Get medical advice/attention P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P310 - Immediately call a doctor P362 - Take off contaminated clothing and wash before reuse P370+P378 - In case of fire: Use water spray, foam, carbon dioxide, dry chemical to extinguish P403+P235 - Keep in a cool place P501 - Dispose of contents/container to licensed waste disposal facility.

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2.3. Other hazards			
No additional information available			
2.4. Unknown acute toxicity (GHS-US)			
No data available			
SECTION 3: Composition/informatio	n on ingredients		
3.1. Substance			
Substance type	: Mono-constituent		
Name	: ACRYLOXYMETHYLTRIMETHOXYSILANE		
CAS No	: 21134-38-3		
Name	Product identifier	%	Classification (GHS-US)
Acryloxymethyltrimethoxysilane	(CAS No) 21134-38-3		Flam. Liq. 4, H227 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317
Hydroquinone monomethyl ether	(CAS No) 150-76-5		Acute Tox. 4 (Oral), H302 Eye Irrit. 2B, H320 Skin Sens. 1, H317
Methanol	(CAS No) 67-56-1		Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation:vapour), H331 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 1, H370 STOT SE 3, H336
3.2. Mixture			
Not applicable			
SECTION 4: First aid measures			
4.1. Description of first aid measures		_	
First-aid measures general	: Remove contaminated clothing and shoes. In case medical advice immediately (show the label where available show packaging or label.		
First-aid measures after inhalation	: Remove victim to fresh air and keep at rest in a po unwell, seek medical advice.	sition comfort	table for breathing. If you feel
First-aid measures after skin contact	: Wash with plenty of soap and water. Get medical a	dvice/attentio	on.
First-aid measures after eye contact	: Immediately flush eyes thoroughly with water for at present and easy to do. Continue rinsing. Get imm		
First-aid measures after ingestion	: Never give anything by mouth to an unconscious p	erson. Get m	edical advice/attention.
4.2. Most important symptoms and effect	ts, both acute and delayed		
Symptoms/injuries after inhalation	: May cause irritation to the respiratory tract. Overex Nausea.	posure may	cause: Coughing. Headache.
Symptoms/injuries after skin contact	: Causes skin irritation. May cause an allergic skin re effect.	eaction. Acryl	lates can have a sensitizing
Symptoms/injuries after eye contact	: Causes serious eye damage.		
Symptoms/injuries after ingestion	: Oral toxicity is associated with methanol, the solve nausea, vomiting, headache, visual effects includin		olysis product which causes
Chronic symptoms	: On contact with water this compound liberates met effect on the central nervous system. Methanol ma in persistent or recurring headaches or impaired vis	y effect the c	
4.3. Indication of any immediate medical	l attention and special treatment needed		

NOTE TO PHYSICIAN: This product reacts with water in the acid contents of the stomach to form methanol. The combination of visual disturbances, metabolic acidosis and formic acid in urine is evidence of methanol poisoning. The therapeutic intravenous administration of ethanol (10 mls/hour) allows methanol to be preferentially oxidized and reduces production of methanol metabolites. Acidosis must be treated with intravenous administration of sodium bicarbonate and methanol elimination may be increased by hemodialysis, as indicated. Treatment should be based on blood methanol levels and acid-base balance.

SECT	ION 5: Firefighting measure	es
5.1.	Extinguishing media	
Suitable	e extinguishing media	: Water spray. Foam. Carbon dioxide. Dry chemical.
5.2.	Special hazards arising from the substance or mixture	
Fire haz	zard	: Combustible liquid. Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.

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i.3. Advice for firefi	0		
Firefighting instructions		I exposed surfaces. Exercise caution when fighting any chemical fire.	
Protection during firefightir	0	: Do not enter fire area without proper protective equipment, including respiratory protection. Avoid all eye and skin contact and do not breathe vapor and mist.	
SECTION 6: Accide	ntal release measures		
	utions, protective equipment and emergency p		
General measures	: Remove ignition source	es. Use special care to avoid static electric charges.	
5.1.1. For non-emerge	ency personnel		
mergency procedures	: Evacuate unnecessary	personnel.	
5.1.2. For emergency	responders		
Protective equipment	: Equip cleanup crew wit	th proper protection.	
5.2. Environmental	precautions		
Prevent entry to sewers ar	nd public waters. Notify authorities if liquid enters	sewers or public waters.	
3.3. Methods and m	aterial for containment and cleaning up		
lethods for cleaning up		soon as possible, using an absorbent material to collect it. Sweep or priate container for disposal. Use only non-sparking tools.	
.4. Reference to ot			
	controls and personal protection.		
SECTION 7: Handlin			
7.1. Precautions for			
Precautions for safe handling	process area to preven	contact and do not breathe vapor and mist. Provide good ventilation in at accumulation of vapors. Containers must be properly grounded befor only non-sparking tools.	
Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse.			
2.2. Conditions for	safe storage, including any incompatibilities		
echnical measures : Ground/bond container and receiving equipment.		0 1 1	
Storage conditions	: Keep container tightly closed. Store in sealed containers in the dark at 0-5°C.		
ncompatible materials	npatible materials : Moisture. Water. age area : Store in a well-ventilated place. Store away from heat.		
		su place. Stole away nom neat.	
7.3. Specific end us No additional information a			
3.1. Control parame	re controls/personal protection		
Methanol (67-56-1) USA ACGIH	ACGIH TWA (ppm)	200 ppm	
USA ACGIH	ACGIH STEL (ppm)	250 ppm	
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	260 mg/m ³	
USA NIOSH	NIOSH REL (TWA) (ppm)	200 ppm	
USA NIOSH	NIOSH REL (STEL) (mg/m ³)	325 mg/m ³	
USA NIOSH	NIOSH REL (STEL) (ppm)	250 ppm	
USA OSHA	OSHA PEL (TWA) (mg/m ³)		
USA OSHA	OSHA PEL (TWA) (mg/m ³) 260 mg/m ³ OSHA PEL (TWA) (ppm) 200 ppm		
USA IDLH			
	A IDLH US IDLH (ppm) 6000 ppm		
USA ACGIH	ACGIH TWA (mg/m ³)	5 mg/m ³	
	· · · · · · · · · · · · · · · · · · ·		
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	5 mg/m ³	

Personal protective equipment

: Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

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Hand protection	: Neoprene or nitrile rubber gloves.	
Eye protection	: Chemical goggles or face shield. Contact lenses should not be worn.	
Skin and body protection	: Wear suitable protective clothing.	
Respiratory protection	: NIOSH-certified combination organic vapor/acid gas (yellow cartridge) respirator.	
SECTION 9: Physical and chemical properties		

SECTION 9. Thysical and chemical	
9.1. Information on basic physical and	
Physical state	: Liquid
Appearance	: Clear liquid.
Molecular mass	: 206.27 g/mol
Color	: Straw.
Odor	: Mild.
Odor threshold	: No data available
Refractive index	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: No data available
Freezing point	: <0 °C
Boiling point	: 42 - 46 °C @ 0.15 mm Hg
Flash point	: 62 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Combustible liquid
Vapor pressure	: <1 mm Hg @ 25°C
Relative vapor density at 20 °C	: >1
Relative density	: 1.06
VOC content	: < 5 %
Solubility	: Insoluble in water. Reacts with water.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available
9.2. Other information	

No additional information available

SECTI	ON 10: Stability and reactivity
10.1.	Reactivity
No addit	ional information available
10.2.	Chemical stability
Stable in	sealed containers stored in the dark at 0-5°C. Polymerization can occur when stored at elevated temperature.
10.3.	Possibility of hazardous reactions
Reacts v	vith water and moisture in air, liberating methanol.
10.4.	Conditions to avoid
Heat. Op	ben flame. Sparks.
10.5.	Incompatible materials
Moisture	. Water.
10.6.	Hazardous decomposition products
Methanc	I. Organic acid vapors.
SECTI	ON 11: Toxicological information
11.1.	Information on toxicological effects

Acute toxicity

: Not classified

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LD50 oral rat LD50 dermal rabbit	6200 mg/kg
LD50 dermal rabbit	5 5
	20 g/kg
LC50 inhalation rat (ppm)	22500 ppm (Exposure time: 8 h)
ATE US (oral)	100.000 mg/kg body weight
ATE US (dermal)	300.000 mg/kg body weight
ATE US (vapors)	3.000 mg/l/4h
Hydroquinone monomethyl ether (150-76-5)	
LD50 oral rat	1600 mg/kg
Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitization	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	Not classified
Specific target organ toxicity (single exposure)	Not classified
Specific target organ toxicity (repeated exposure)	Not classified
Aspiration hazard	Not classified
Symptoms/injuries after inhalation	May cause irritation to the respiratory tract. Overexposure may cause: Coughing. Headache. Nausea.
Symptoms/injuries after skin contact	Causes skin irritation. May cause an allergic skin reaction. Acrylates can have a sensitizing effect.
Symptoms/injuries after eye contact	Causes serious eye damage.
Symptoms/injuries after ingestion	 Oral toxicity is associated with methanol, the solvent and a hydrolysis product which causes nausea, vomiting, headache, visual effects including blindness.
Chronic symptoms	On contact with water this compound liberates methanol which is known to have a chronic effect on the central nervous system. Methanol may effect the central nervous system resulting in persistent or recurring headaches or impaired vision.
Reason for classification	Expert judgment

SECTION 12: Ecological information 12.1. Toxicity

Methanol (67-56-1)		
LC50 fish 1	28200 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])	
LC50 fish 2	> 100 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])	
Hydroquinone monomethyl ether (150-76-5)		
LC50 fish 1	84.3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])	
LC50 fish 2	28.5 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])	

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Methanol (67-56-1)		
BCF fish 1	< 10	
Log Pow	-0.77	
Hydroquinone monomethyl ether (150-76-5)		
Log Pow	1.34	
2.4. Mobility in soil		

No additional information available

12.5. Other adverse effects	
Other adverse effects	: This substance may be hazardous to the environment.
Effect on ozone layer	: No additional information available
Effect on the global warming	: No known ecological damage caused by this product.

SECTION 13: Disposal considerations			
13.1. Waste treatment methods			
Waste disposal recommendations	: May be incinerated. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.		

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Ecology - waste materials	: Avoid release to the environment.
SECTION 14: Transport information	
14.1. UN number	
DOT NA no.	NA1993
14.2. UN proper shipping name	
Proper Shipping Name (DOT)	: Combustible liquid, n.o.s.
	(ACRYLOXYMETHYLTRIMETHOXYSILANE)
Department of Transportation (DOT) Hazard	: 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
Classes	
DOT Symbols	: D - Proper shipping name for domestic use only, or to and from Canada,G - Identifies PSN
	requiring a technical name
Packing group (DOT)	: III - Minor Danger
DOT Packaging Exceptions (49 CFR 173.xxx)	: 150
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 203
DOT Packaging Bulk (49 CFR 173.xxx)	: 241
14.3. Additional information	
Other information	: No supplementary information available.
Transport by sea	
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a
	passenger vessel.
Air tropoport	
Air transport	
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	. 80 L
DOT Quantity Limitations Cargo aircraft only (49	: 220 L
CFR 175.75)	
SECTION 15: Regulatory information	
15.1. US Federal regulations	
ACRYLOXYMETHYLTRIMETHOXYSILANE (2	
TSCA Exemption/Exclusion	Low Volume Exemption in accordance with 40 CFR 723.50(c)(1).
Methanol (67-56-1)	
Listed on the United States TSCA (Toxic Substa	ances Control Act) inventory
Listed on United States SARA Section 313	1.0.9/
SARA Section 313 - Emission Reporting Acryloxymethyltrimethoxysilane (21134-38-3	1.0 %
Not listed on the United States TSCA (Toxic Su	
Hydroquinone monomethyl ether (150-76-5)	
Listed on the United States TSCA (Toxic Substa	ances Control Act) inventory
EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.
15.2. International regulations	
Methanol (67-56-1)	
Listed on the AICS (Australian Inventory of Che Listed on the Canadian DSL (Domestic Sustand	mical Substances)
Listed on IECSC (Inventory of Existing Chemica	
Listed on the EEC inventory EINECS (Europear	n Inventory of Existing Commercial Chemical Substances)
Listed on the Japanese ENCS (Existing & New	
Listed on the Korean ECL (Existing Chemicals I Listed on NZIoC (New Zealand Inventory of Che	
Listed on PICCS (Philippines Inventory of Cherr	
Japanese Poisonous and Deleterious Substanc	es Control Law

Listed on the Canadian IDL (Ingredient Disclosure List)

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Salety Data Sheet				
Acryloxymethyltrimetho	oxysilane (21134-38-3)			
Hydroquinone monome				
Listed on the AICS (Austr Listed on the Canadian D Listed on IECSC (Invento Listed on the EEC invento Listed on the Japanese E Listed on the Korean ECL Listed on NZIOC (New Ze Listed on PICCS (Philippi	ralian Inventory of Chemical S SL (Domestic Sustances Listory of Existing Chemical Substances)	t) tances Produced or Imported in nory of Existing Commercial Che cal Substances) inventory s) and Chemical Substances)		
15.3. US State regulation	S			
	- IETHOXYSILANE(21134-38	-3)		
U.S California - Propositi		No		
U.S California - Proposition 65 - Developmental Toxicity		No		
U.S California - Proposition 65 - Reproductive Toxicity - Female		No		
U.S California - Proposition 65 - Reproductive Toxicity - Male		No		
Methanol (67-56-1)				
U.S California - Proposition 65 - Carcinogens List	U.S California - Proposition 65 - Developmental Toxicity	U.S California - Proposition 65 - Reproductive Toxicity - Female	U.S California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
No	Yes	No	No	
Acryloxymethyltrimethox	(ysilane (21134-38-3)			
U.S California - Proposition 65 - Carcinogens List	U.S California - Proposition 65 - Developmental Toxicity	U.S California - Proposition 65 - Reproductive Toxicity - Female	U.S California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
No	No	No	No	
Hydroquinone monometh				
U.S California - Proposition 65 - Carcinogens List	U.S California - Proposition 65 - Developmental Toxicity	U.S California - Proposition 65 - Reproductive Toxicity - Female	U.S California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
No	No	No	No	
Methanol (67-56-1)				
U.S California - SCAQMI U.S California - SCAQMI U.S California - Toxic Air U.S Colorado - Hazardou U.S Connecticut - Hazard U.S Connecticut - Hazard U.S Connecticut - Volatil U.S Delaware - Pollutant U.S Idaho - Non-Carcino	dous Air Pollutants - HLVs (3 dous Air Pollutants - HLVs (8 e Substances : Discharge Requirements - F	Non-Cancer Acute Non-Cancer Chronic AB 2728) ical Products, Off-Specification S 0 min) hr) Reportable Quantities cceptable Ambient Concentratio		sidues

- Idaho Non-Carcinogenic Toxic Air Pollutants Emission Levels (ELs)
- U.S. Idaho Occupational Exposure Limits TWAs
- U.S. Illinois Toxic Air Contaminants
- U.S. Louisiana Reportable Quantity List for Pollutants
- U.S. Maine Air Pollutants Hazardous Air Pollutants
- U.S. Maine Chemicals of High Concern
- U.S. Massachusetts Allowable Ambient Limits (AALs)
- U.S. Massachusetts Allowable Threshold Concentrations (ATCs) U.S. Massachusetts Oil & Hazardous Material List Groundwater Reportable Concentration Reporting Category 1
- U.S. Massachusetts Oil & Hazardous Material List Groundwater Reportable Concentration Reporting Category 2
- U.S. Massachusetts Oil & Hazardous Material List Reportable Quantity U.S. Massachusetts Oil & Hazardous Material List Soil Reportable Concentration Reporting Category 1
- U.S. Massachusetts Oil & Hazardous Material List Soil Reportable Concentration Reporting Category 2
- U.S. Massachusetts Right To Know List
- U.S. Massachusetts Threshold Effects Exposure Limits (TELs)
- U.S. Massachusetts Toxics Use Reduction Act
- U.S. Michigan Occupational Exposure Limits Skin Designations
- U.S. Michigan Occupational Exposure Limits STELs

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Methanol (67-56-1)
U.S Michigan - Occupational Exposure Limits - TWAs
U.S Michigan - Polluting Materials List
U.S Minnesota - Chemicals of High Concern
U.S Minnesota - Groundwater Health Risk Limits
U.S Minnesota - Hazardous Substance List
U.S Minnesota - Permissible Exposure Limits - Skin Designations
U.S Minnesota - Permissible Exposure Limits - STELs
U.S Minnesota - Permissible Exposure Limits - TWAs
U.S New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour
U.S New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual
U.S New Jersey - Discharge Prevention - List of Hazardous Substances
U.S New Jersey - Environmental Hazardous Substances List U.S New Jersey - Right to Know Hazardous Substance List
U.S New Jersey - Right to Know Hazardous Substances List
U.S New Jersey - Water Quality - Ground Water Quality Criteria
U.S New Jersey - Water Quality - Practical Quantitation Levels (PQLs)
U.S New York - Occupational Exposure Limits - Skin Designations
U.S New York - Occupational Exposure Limits - TWAs
U.S New York - Reporting of Releases Part 597 - List of Hazardous Substances
U.S North Dakota - Air Pollutants - Guideline Concentrations - 1-Hour
U.S North Dakota - Air Pollutants - Guideline Concentrations - 8-Hour
U.S North Dakota - Hazardous Wastes - Discarded Chemical Products, Off-Specification Species, Container and Spill Residues
U.S Oregon - Permissible Exposure Limits - TWAs
U.S Pennsylvania - RTK (Right to Know) - Environmental Hazard List
U.S Pennsylvania - RTK (Right to Know) List
U.S Rhode Island - Air Toxics - Acceptable Ambient Levels - 1-Hour
U.S Rhode Island - Air Toxics - Acceptable Ambient Levels - Annual
U.S South Carolina - Toxic Air Pollutants - Maximum Allowable Concentrations
U.S South Carolina - Toxic Air Pollutants - Pollutant Categories U.S Tennessee - Occupational Exposure Limits - Skin Designations
U.S Tennessee - Occupational Exposure Limits - STELs
U.S Tennessee - Occupational Exposure Limits - TWAs
U.S Texas - Effects Screening Levels - Long Term
U.S Texas - Effects Screening Levels - Short Term
U.S Vermont - Permissible Exposure Limits - Skin Designations
U.S Vermont - Permissible Exposure Limits - STELs
U.S Vermont - Permissible Exposure Limits - TWAs
U.S Washington - Dangerous Waste - Discarded Chemical Products List
U.S Washington - Permissible Exposure Limits - Skin Designations
U.S Washington - Permissible Exposure Limits - STELs U.S Washington - Permissible Exposure Limits - TWAs
U.S Washington - Permissible Exposure Limits - TWAS
Hydroquinone monomethyl ether (150-76-5)
U.S Connecticut - Hazardous Air Pollutants - HLVs (30 min)
U.S Connecticut - Hazardous Air Pollutants - HLVs (8 hr)
U.S Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations
U.S Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs)
U.S Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 1
U.S Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 2
U.S Massachusetts - Oil & Hazardous Material List - Reportable Quantity
U.S Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1
U.S Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2
U.S Massachusetts - Right To Know List U.S Michigan - Occupational Exposure Limits - TWAs
U.S Minnesota - Hazardous Substance List
U.S Minnesota - Permissible Exposure Limits - TWAs
U.S New Jersey - Right to Know Hazardous Substance List
U.S New York - Occupational Exposure Limits - TWAs
U.S North Dakota - Air Pollutants - Guideline Concentrations - 8-Hour
U.S Pennsylvania - RTK (Right to Know) List
U.S Pennsylvania - RTK (Right to Know) List U.S Tennessee - Occupational Exposure Limits - TWAs
U.S Pennsylvania - RTK (Right to Know) List U.S Tennessee - Occupational Exposure Limits - TWAs U.S Texas - Effects Screening Levels - Long Term
U.S Pennsylvania - RTK (Right to Know) List U.S Tennessee - Occupational Exposure Limits - TWAs U.S Texas - Effects Screening Levels - Long Term U.S Texas - Effects Screening Levels - Short Term
U.S Pennsylvania - RTK (Right to Know) List U.S Tennessee - Occupational Exposure Limits - TWAs U.S Texas - Effects Screening Levels - Long Term U.S Texas - Effects Screening Levels - Short Term U.S Vermont - Permissible Exposure Limits - TWAs
U.S Pennsylvania - RTK (Right to Know) List U.S Tennessee - Occupational Exposure Limits - TWAs U.S Texas - Effects Screening Levels - Long Term U.S Texas - Effects Screening Levels - Short Term U.S Vermont - Permissible Exposure Limits - TWAs U.S Washington - Permissible Exposure Limits - STELs
U.S Pennsylvania - RTK (Right to Know) List U.S Tennessee - Occupational Exposure Limits - TWAs U.S Texas - Effects Screening Levels - Long Term U.S Texas - Effects Screening Levels - Short Term U.S Vermont - Permissible Exposure Limits - TWAs U.S Washington - Permissible Exposure Limits - STELs U.S Washington - Permissible Exposure Limits - TWAs
U.S Pennsylvania - RTK (Right to Know) List U.S Tennessee - Occupational Exposure Limits - TWAs U.S Texas - Effects Screening Levels - Long Term U.S Texas - Effects Screening Levels - Short Term U.S Vermont - Permissible Exposure Limits - TWAs U.S Washington - Permissible Exposure Limits - STELs U.S Washington - Permissible Exposure Limits - TWAs U.S Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 25 Feet to Less Than 40 Feet
U.S Pennsylvania - RTK (Right to Know) List U.S Tennessee - Occupational Exposure Limits - TWAs U.S Texas - Effects Screening Levels - Long Term U.S Texas - Effects Screening Levels - Short Term U.S Vermont - Permissible Exposure Limits - TWAs U.S Washington - Permissible Exposure Limits - STELs U.S Washington - Permissible Exposure Limits - TWAs U.S Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 25 Feet to Less Than 40 Feet U.S Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 40 Feet to Less Than 75 Feet
U.S Pennsylvania - RTK (Right to Know) List U.S Tennessee - Occupational Exposure Limits - TWAs U.S Texas - Effects Screening Levels - Long Term U.S Texas - Effects Screening Levels - Short Term U.S Vermont - Permissible Exposure Limits - TWAs U.S Washington - Permissible Exposure Limits - STELs U.S Washington - Permissible Exposure Limits - TWAs U.S Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 25 Feet to Less Than 40 Feet

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Abbreviations and acronyms	: Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal
	Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology
	Program; HMIS: Hazardous Material Information System; CAS No.: Chemcial Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development.

Full text of H-phrases::

Acute Tox. 3 (Dermal)	Acute toxicity (dermal) Category 3
Acute Tox. 3 (Inhalation:vapour)	Acute toxicity (inhalation:vapor) Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2B	Serious eye damage/eye irritation Category 2B
Flam. Liq. 2	Flammable liquids Category 2
Flam. Liq. 4	Flammable liquids Category 4
Skin Irrit. 2	Skin corrosion/irritation Category 2
Skin Sens. 1	Skin sensitization Category 1
STOT SE 1	Specific target organ toxicity (single exposure) Category 1
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H225	Highly flammable liquid and vapor
H227	Combustible liquid
H301	Toxic if swallowed
H302	Harmful if swallowed
H311	Toxic in contact with skin
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H320	Causes eye irritation
H331	Toxic if inhaled
H336	May cause drowsiness or dizziness
H370	Causes damage to organs

HMIS III Rating

Health Flammability Physical : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

: 1 Slight Hazard : 1 Slight Hazard

Prepared by safety and environmental affairs.

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SDS US (GHS HazCom 2012) - Custom

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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