

**4-BROMOBUTYLTRIMETHOXYSILANE**

Safety Data Sheet SIB1879.7

Date of issue: 01/06/2015 Version: 1.0

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product form : Substance  
 Physical state : Liquid  
 Substance name : 4-BROMOBUTYLTRIMETHOXYSILANE  
 Product code : SIB1879.7  
 Formula : C7H17BrO3Si  
 Synonyms : 1-BROMO-4-(TRIMETHOXYSILYL)BUTANE  
 Chemical family : ORGANOMETHOXYSILANE

**1.2. Relevant identified uses of the substance or mixture and uses advised against**

Use of the substance/mixture : For research use only  
 Chemical intermediate

**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 EST

[info@gelest.com](mailto:info@gelest.com) - [www.gelest.com](http://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 mixture****Classification (GHS-US)**

Flam. Liq. 4 H227  
 Skin Irrit. 2 H315  
 Eye Irrit. 2A H319

Full text of H-phrases: see section 16

**2.2. Label elements****GHS-US labeling**

Hazard pictograms (GHS-US) :



GHS07

Signal word (GHS-US) :

: Warning

Hazard statements (GHS-US) :

: H227 - Combustible liquid  
 H315 - Causes skin irritation  
 H319 - Causes serious eye irritation

Precautionary statements (GHS-US) :

: P280 - Wear eye protection, protective gloves, protective clothing  
 P210 - Keep away from heat, open flames, sparks. - No smoking  
 P264 - Wash hands thoroughly after handling  
 P302+P352 - If on skin: Wash with plenty of water  
 P332+P313 - If skin irritation 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  
 P337+P313 - If eye irritation persists: Get medical advice/attention  
 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.

**2.3. Other hazards**

No additional information available

**2.4. Unknown acute toxicity (GHS-US)**

No data available

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### SECTION 3: Composition/information on ingredients

#### 3.1. Substance

Substance type	: Mono-constituent
Name	: 4-BROMOBUTYLTRIMETHOXYSILANE
CAS No	: 226558-82-3

Name	Product identifier	%	Classification (GHS-US)
4-Bromobutyltrimethoxysilane	(CAS No) 226558-82-3	> 95	Flam. Liq. 4, H227 Skin Irrit. 2, H315 Eye Irrit. 2A, H319
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 of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.
First-aid measures after inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice.
First-aid measures after skin contact	: Wash with plenty of soap and water.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
First-aid measures after ingestion	: Never give anything by mouth to an unconscious person. Get medical advice/attention.

#### 4.2. Most important symptoms and effects, both acute and delayed

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.
Symptoms/injuries after eye contact	: Causes serious eye irritation.
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.

#### 4.3. Indication of any immediate medical 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 ml/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.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Foam. Carbon dioxide. Dry chemical.

#### 5.2. Special hazards arising from the substance or mixture

Fire hazard : Combustible liquid. Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.

#### 5.3. Advice for firefighters

Firefighting instructions	: Use water spray to cool exposed surfaces. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protection during firefighting	: 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: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove ignition sources. Use special care to avoid static electric charges.

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### 6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

### 6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Clean up any spills as soon as possible, using an absorbent material to collect it. Sweep or shovel spills into appropriate container for disposal. Use only non-sparking tools.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Additional hazards when processed : Keep away from heat, open flames, sparks. - No smoking.  
Precautions for safe handling : Provide good ventilation in process area to prevent accumulation of vapors. Avoid all eye and skin contact and do not breathe vapor and mist. Containers and transfer lines require grounding during use. Use 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.

### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed.  
Storage conditions : Keep container tightly closed.  
Incompatible materials : Acids. Alcohols. Lewis acids. Oxidizing agent. Peroxides. Moisture. Water.  
Storage area : Store in a well-ventilated place. Store away from heat.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

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 <sup>3</sup> )	260 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (TWA) (ppm)	200 ppm
USA NIOSH	NIOSH REL (STEL) (mg/m <sup>3</sup> )	325 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (STEL) (ppm)	250 ppm
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	260 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (ppm)	200 ppm
USA IDLH	US IDLH (ppm)	6000 ppm

### 8.2. Exposure controls

Appropriate engineering controls : Provide local exhaust or general room ventilation.  
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.  
Hand protection : Neoprene or nitrile rubber gloves.  
Eye protection : Chemical goggles. Contact lenses should not be worn.  
Skin and body protection : Wear suitable protective clothing.  
Respiratory protection : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Liquid  
Appearance : Clear liquid.  
Molecular mass : 257.2 g/mol

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Color	: Straw.
Odor	: Mild.
Odor threshold	: No data available
Refractive index	: 1.4437
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: No data available
Freezing point	: < 0 °C
Boiling point	: 68 - 69 °C @ 1 mm Hg
Flash point	: > 65 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Combustible liquid
Vapor pressure	: < 1 mm Hg
Relative vapor density at 20 °C	: > 1
Relative density	: 1.259
Solubility	: 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

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable in sealed containers stored under dry nitrogen.

### 10.3. Possibility of hazardous reactions

Reacts with water and moisture in air, liberating methanol.

### 10.4. Conditions to avoid

Heat. Sparks. Open flame.

### 10.5. Incompatible materials

Acids. Alcohols. Lewis acids. Oxidizing agent. Peroxides. Moisture. Water.

### 10.6. Hazardous decomposition products

Hydrogen bromide. Methanol. Organic acid vapors.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

Methanol (67-56-1)	
LD50 oral rat	6200 mg/kg
LD50 dermal rabbit	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

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: Not classified

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### Methanol (67-56-1)

Germ cell mutagenicity	: Not classified
	A recent study indicated that the related compound, chloropropyltrimethoxysilane, is a genetically active material via inhalation in a bone marrow micronucleus assay in female rats exposed to 200ppm daily over a 28 day period. However, using the same assay, no evidence of genetic activity was found in mice exposed to 500, 1000, or 1625 mg/kg by intraperitoneal injection. The relevance of this information to humans has not yet been determined.
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.
Symptoms/injuries after eye contact	: Causes serious eye irritation.
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.

## 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])

### 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

### 12.4. 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	: Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility. May be incinerated.
Ecology - waste materials	: Avoid release to the environment.

## SECTION 14: Transport information

### 14.1. UN number

DOT NA no.	NA1993
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### 14.2. UN proper shipping name

Proper Shipping Name (DOT)	: Combustible liquid, n.o.s. (4-BROMOBUTYLTRIMETHOXYSILANE)
Department of Transportation (DOT) Hazard Classes	: 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
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

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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 transport

DOT Quantity Limitations Passenger aircraft/rail : 60 L  
(49 CFR 173.27)

DOT Quantity Limitations Cargo aircraft only (49 : 220 L  
CFR 175.75)

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### 4-BROMOBUTYLTRIMETHOXYSILANE (226558-82-3)

TSCA Exemption/Exclusion	CAUTION: This material is supplied for research and development purposes subject to the R&D exemption under TSCA, 40 CFR 720.36, and must meet the requirements of the exemption, including supervision by a "technically qualified individual" as defined by 40 CFR 720.3(ee). The use of this material for "commercial purposes" as defined by 40 CFR 720.3(r) is not permitted in the United States.
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#### Methanol (67-56-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory  
Listed on United States SARA Section 313

SARA Section 313 - Emission Reporting : 1.0 %

#### 4-Bromobutyltrimethoxysilane (226558-82-3)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

### 15.2. International regulations

#### Methanol (67-56-1)

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on the Canadian DSL (Domestic Substances List)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on the Korean ECL (Existing Chemicals List)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Japanese Poisonous and Deleterious Substances Control Law  
Listed on the Canadian IDL (Ingredient Disclosure List)

#### 4-Bromobutyltrimethoxysilane (226558-82-3)

### 15.3. US State regulations

#### 4-BROMOBUTYLTRIMETHOXYSILANE(226558-82-3)

U.S. - California - Proposition 65 - Carcinogens List	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	

#### 4-Bromobutyltrimethoxysilane (226558-82-3)

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)
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Methanol (67-56-1)				
No	No	No	No	

Methanol (67-56-1)				
U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)				
U.S. - California - SCAQMD - Toxic Air Contaminants - Non-Cancer Acute				
U.S. - California - SCAQMD - Toxic Air Contaminants - Non-Cancer Chronic				
U.S. - California - Toxic Air Contaminant List (AB 1807, AB 2728)				
U.S. - Colorado - Hazardous Wastes - Discarded Chemical Products, Off-Specification Species, Container and Spill Residues				
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min)				
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (8 hr)				
U.S. - Connecticut - Volatile Substances				
U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities				
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations				
U.S. - 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 (TEELs)				
U.S. - Massachusetts - Toxics Use Reduction Act				
U.S. - Michigan - Occupational Exposure Limits - Skin Designations				
U.S. - Michigan - Occupational Exposure Limits - STELs				
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 - Special Health Hazards 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				

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### SECTION 16: Other information

#### 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.: Chemical 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
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Flam. Liq. 2	Flammable liquids Category 2
Flam. Liq. 4	Flammable liquids Category 4
Skin Irrit. 2	Skin corrosion/irritation Category 2
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
H311	Toxic in contact with skin
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H331	Toxic if inhaled
H336	May cause drowsiness or dizziness
H370	Causes damage to organs

#### HMIS III Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given  
Flammability : 2 Moderate Hazard  
Physical : 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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