

Safety Data Sheet AKM503 Date of issue: 12/30/2014 Version: 1.0

# SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### **Product identifier**

Product form : Mixture Physical state : Liquid

Product name : MAGNESIUM METHOXIDE, 7-8% in methanol

Product code AKM503 : C2H6MgO2 Formula

: MAGNESIUM DIMETHOXIDE; MAGNESIUM METHYLATE Synonyms

: METAL COMPOUND Chemical family

## Relevant identified uses of the substance or mixture and uses advised against

: Chemical intermediate Use of the substance/mixture

For research and industrial use only

#### 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 - www.gelest.com

## **Emergency telephone number**

**Emergency number** : CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

# **SECTION 2: Hazards identification**

### Classification of the substance or mixture

## Classification (GHS-US)

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

Full text of H-phrases: see section 16

#### **Label elements**

# **GHS-US** labeling

Hazard pictograms (GHS-US)











GHS02

GHS05

GHS06

GHS07

GHS08

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H225 - Highly flammable liquid and vapor

H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled

H315 - Causes skin irritation H318 - Causes serious eye damage H336 - May cause drowsiness or dizziness H370 - Causes damage to organs

Precautionary statements (GHS-US) P280 - Wear protective gloves/protective clothing/eye protection/face protection

P260 - Do not breathe vapors

P264 - Wash hands thoroughly after handling

P210 - Keep away from heat, sparks, open flames. - No smoking P240 - Ground/bond container and receiving equipment

P241 - Use explosion-proof electrical equipment P242 - Use only non-sparking tools

P243 - Take precautionary measures against static discharge P271 - Use only outdoors or in a well-ventilated area P270 - Do not eat, drink or smoke when using this product

EN (English US) SDS ID: AKM503 12/30/2014 Page 1

# Safety Data Sheet

P330 - Rinse mouth

P301+P310 - If swallowed: Immediately call a POISON CENTER

P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing P307+P311 - If exposed: Call a poison center/doctor

P332+P313 - If skin irritation occurs: Get medical advice/attention

P361 - Take off immediately all contaminated clothing

P362 - Take off contaminated clothing and wash before reuse

P363 - Wash contaminated clothing before reuse

P370+P378 - In case of fire: Use alcohol resistant foam, carbon dioxide, dry chemical to

extinguish

P403+P233 - Store in a well-ventilated place. Keep container tightly closed

P403+P235 - Keep in a cool place

P405 - Store locked up

P501 - Dispose of contents/container to licensed waste disposal facility.

#### Other hazards 2.3.

No additional information available

#### **Unknown acute toxicity (GHS-US)**

No data available

# **SECTION 3: Composition/information on ingredients**

#### **Substance**

Not applicable

#### 3.2. **Mixture**

Name	Product identifier	%	Classification (GHS-US)
Methanol	(CAS No) 67-56-1	> 90	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
Magnesium methoxide	(CAS No) 109-88-6	< 10	Skin Irrit. 2, H315 Eye Irrit. 2A, H319

# **SECTION 4: First aid measures**

#### **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. Call a POISON CENTER or doctor/physician.

First-aid measures after inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.

First-aid measures after skin contact

Remove/take off immediately all contaminated clothing. Wash with plenty of soap and water. Immediately call a poison center or doctor/physician. Wash contaminated clothing before reuse.

First-aid measures after eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.

First-aid measures after ingestion

Never give anything by mouth to an unconscious person. Immediately call a poison center or doctor/physician.

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

Symptoms/injuries

: Causes damage to organs.

Symptoms/injuries after inhalation

Toxic if inhaled. Danger of serious damage to health by prolonged exposure through inhalation. May cause drowsiness or dizziness. Overexposure may cause: Coughing. Headache. Nausea. Visual disturbances.

Symptoms/injuries after skin contact

Toxic in contact with skin. Repeated exposure to this material can result in absorption through skin causing significant health hazard. Causes skin irritation.

Symptoms/injuries after eye contact

: Causes serious eye irritation.

Symptoms/injuries after ingestion

: Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard. 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.

SDS ID: AKM503 12/30/2014 EN (English US) 2/9

Safety Data Sheet

#### 4.3. Indication of any immediate medical attention and special treatment needed

NOTE TO PHYSICIAN: 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.

# **SECTION 5: Firefighting measures**

### 5.1. Extinguishing media

Suitable extinguishing media : Alcohol-resistant foam. Carbon dioxide. Dry chemical.

Unsuitable extinguishing media : Water.

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

Fire hazard : Highly flammable liquid and vapor. Reacts with water, releasing magnesium hydroxide.

Irritating fumes and organic acid vapors may develop when material is exposed to elevated

temperatures or open flame.

Explosion hazard : May form flammable/explosive vapor-air mixture.

#### 5.3. Advice for firefighters

Firefighting instructions : Exercise caution when fighting any chemical fire.

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 : Eliminate every possible source of ignition. Use special care to avoid static electric charges.

#### 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. Avoid breathing vapors.

# 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 : Handle empty containers with care because residual vapors are flammable.

Precautions for safe handling : Avoid all eye and skin contact and do not breathe vapor and mist. Containers must be properly

grounded before beginning transfer. Provide good ventilation in process area to prevent accumulation of vapors. Use only non-sparking tools. Use only outdoors or in a well-ventilated

Hygiene measures : Wash hands and other exposed areas with m

: 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. Ground/bond

container and receiving equipment. Use explosion-proof electrical equipment.

Storage conditions : Keep container tightly closed.

Incompatible materials : Air. 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

12/30/2014 EN (English US) SDS ID: **AKM503** 3/9

# Safety Data Sheet

Methanol (67-56-1)					
USA NIOSH	NIOSH REL (TWA) (mg/m³)	260 mg/m <sup>3</sup>			
USA NIOSH	NIOSH REL (TWA) (ppm)	200 ppm			
USA NIOSH	NIOSH REL (STEL) (mg/m³)	325 mg/m³			
USA NIOSH	NIOSH REL (STEL) (ppm)	250 ppm			
USA OSHA	OSHA PEL (TWA) (mg/m³)	260 mg/m³			
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 : NIOSH-certified organic vapor (black cartridge) respirator.

No data available

# **SECTION 9: Physical and chemical properties**

# 9.1. Information on basic physical and chemical properties

Physical state : Liquid

Appearance : Clear solution. Slightly hazy solution.

Molecular mass : 86.38 g/mol
Color : No data available

Odor : Alcohol.

Odor threshold : No data available

Refractive index : 1.338

Relative evaporation rate (butyl acetate=1) : No data available

Melting point : < 0 °C (solution)

Freezing point : No data available

Boiling point : 68 °C (initial, methanol)

Flash point :  $11 \,^{\circ}\text{C}$ Auto-ignition temperature :  $464 \,^{\circ}\text{C}$ 

Decomposition temperature : No data available

Flammability (solid, gas) : Highly flammable liquid and vapor Vapor pressure : 100 mm Hg @ 21.2°C (methanol)

Relative vapor density at 20 °C : 1.11 (methanol)

Relative density : 0.816 VOC content : > 90 %

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 : 6 - 36.5 vol % (lower; upper)

# 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.

рΗ

12/30/2014 EN (English US) SDS ID: **AKM503** 4/9

# Safety Data Sheet

# 10.3. Possibility of hazardous reactions

Material decomposes slowly in contact with air by reaction with water and carbon dioxide.

## 10.4. Conditions to avoid

Heat. Sparks. Open flame.

# 10.5. Incompatible materials

Air. Water.

## 10.6. Hazardous decomposition products

Magnesium oxide fumes. Methanol. Organic acid vapors.

# **SECTION 11: Toxicological information**

## 11.1. Information on toxicological effects

Acute toxicity : Oral: Toxic if swallowed. Dermal: Toxic in contact with skin. Inhalation:vapour: Toxic if inhaled.

Todio toxiony		Cial. Tokie ii Gwallowed. Definal. Tokie iii Goridad with Gwil. Hilladdich. Yapodi. Tokie ii ililialad.
MAGNESIUM METHOXIDE, 7-8% in methano	ol (1	09-88-6)
ATE US (oral)		111.111 mg/kg body weight
ATE US (dermal)		333.333 mg/kg body weight
ATE US (vapors)		3.333 mg/l/4h
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 damage.
		Methanol causes concentric constriction of visual fields; decreased visusal acuity; dilated, unresponsive pupils; pain, photophobia, blindness.
Respiratory or skin sensitization		: Not classified
Germ cell mutagenicity		: Not classified
Carcinogenicity		: Not classified
Reproductive toxicity	:	Not classified
Specific target organ toxicity (single exposure)		Causes damage to organs. May cause drowsiness or dizziness.
		Inhalation- methanol: May cause euphoria, muscular inccordination, headache, dizziness, vomiting, abdominal cramps, sweating, delirium, coma, convulsions.
Specific target organ toxicity (repeated exposure)	:	Not classified
Aspiration hazard	:	Not classified
Potential Adverse human health effects and symptoms	:	Inhalation- methanol: May cause euphoria, muscular inccordination, headache, dizziness, vomiting, abdominal cramps, sweating, delirium, coma, convulsions.
Symptoms/injuries after inhalation	:	Toxic if inhaled. Danger of serious damage to health by prolonged exposure through inhalation. May cause drowsiness or dizziness. Overexposure may cause: Coughing. Headache. Nausea. Visual disturbances.
Symptoms/injuries after skin contact	:	Toxic in contact with skin. Repeated exposure to this material can result in absorption through skin causing significant health hazard. Causes skin irritation.
Symptoms/injuries after eye contact	:	Causes serious eye irritation.
Symptoms/injuries after ingestion	:	Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard. 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.

# **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

12/30/2014 EN (English US) SDS ID: **AKM503** 5/9

# Safety Data Sheet

#### **Bioaccumulative potential** 12.3.

Methanol (67-56-1)	
BCF fish 1	< 10
Log Pow	-0.77

#### 12.4. Mobility in soil

No additional information available

#### Other adverse effects 12.5.

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**

## Waste treatment methods

: Dispose in a safe manner in accordance with local/national regulations. Dispose of Waste disposal recommendations

contents/container to licensed waste disposal facility.

Additional information : Handle empty containers with care because residual vapors are flammable.

Ecology - waste materials : Avoid release to the environment.

# **SECTION 14: Transport information**

#### 14.1. **UN** number

: 1993 UN-No.(DOT) DOT NA no. UN1993

#### 14.2. **UN** proper shipping name

Proper Shipping Name (DOT) : Flammable liquids, n.o.s.

(MAGNESIUM METHOXIDE, 7-8% in methanol)

: 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

Department of Transportation (DOT) Hazard

Classes

Hazard labels (DOT) : 3 - Flammable liquid



: G - Identifies PSN requiring a technical name **DOT Symbols** 

Packing group (DOT) : II - Medium Danger

DOT Packaging Exceptions (49 CFR 173.xxx) : 150 DOT Packaging Non Bulk (49 CFR 173.xxx) : 202 DOT Packaging Bulk (49 CFR 173.xxx) : 242

# 14.3. Additional information

Other information : No supplementary information available.

### Transport by sea

: B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a **DOT Vessel Stowage Location** 

passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this

6/9

section is exceeded.

# Air transport

DOT Quantity Limitations Passenger aircraft/rail : 5 L

(49 CFR 173.27)

DOT Quantity Limitations Cargo aircraft only (49 : 60 L

CFR 175.75)

# **SECTION 15: Regulatory information**

SARA Section 313 - Emission Reporting

# 15.1. US Federal regulations

Methanol (67-56-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on United States SARA Section 313

1.0 %

12/30/2014 SDS ID: AKM503 EN (English US)

Safety Data Sheet

# Magnesium methoxide (109-88-6)

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 Sustances 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)

# Magnesium methoxide (109-88-6)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on the Canadian NDSL (Non-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)

## 15.3. US State regulations

MAGNESIUM METHOXIDE, 7-8% in methanol(109-88-	6)	
,	<u>v)</u>	
U.S California - Proposition 65 - Carcinogens List	No	
U.S California - Proposition 65 - Developmental	No	
Toxicity		
U.S California - Proposition 65 - Reproductive	No	
Toxicity - Female		
U.S California - Proposition 65 - Reproductive	No	
Toxicity - Male		

Methanol (67-56-1)					
U.S California -	U.S California -	U.S California -	U.S California -	No significance risk level	
Proposition 65 -	Proposition 65 -	Proposition 65 -	Proposition 65 -	(NSRL)	
Carcinogens List	Developmental Toxicity	Reproductive Toxicity -	Reproductive Toxicity -		
		Female	Male		
No	Yes	No	No		
Magnesium methoxide (10	9-88-6)				
U.S California -	U.S California -	U.S California -	U.S California -	No significance risk level	
Proposition 65 -	Proposition 65 -	Proposition 65 -	Proposition 65 -	(NSRL)	
Carcinogens List	Developmental Toxicity	Reproductive Toxicity -	Reproductive Toxicity -		
		Female	Male		

No

# Methanol (67-56-1)

No

- 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)

Nο

U.S. - Colorado - Hazardous Wastes - Discarded Chemical Products, Off-Specification Species, Container and Spill Residues

Nο

- 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

12/30/2014 EN (English US) SDS ID: **AKM503** 7/9

# Safety Data Sheet

# Methanol (67-56-1) 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 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

### **SECTION 16: Other information**

U.S. - Vermont - Permissible Exposure Limits - TWAs

U.S. - Washington - Permissible Exposure Limits - STELs U.S. - Washington - Permissible Exposure Limits - TWAs

U.S. - Washington - Dangerous Waste - Discarded Chemical Products List U.S. - Washington - Permissible Exposure Limits - Skin Designations

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::

kt of 11 philases	
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
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
H301	Toxic if swallowed
H311	Toxic in contact with skin

12/30/2014 EN (English US) SDS ID: **AKM503** 8/9

# Safety Data Sheet

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 : 4 Severe Hazard Physical : 1 Slight Hazard

Prepared by safety and environmental affairs.

Date of issue: 12/30/2014 Version: 1.0

SDS US (GHS HazCom 2012) - Custom

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

The information contained in this document has been gathered from reference materials and/or Gelest, Inc. test data and is to the best knowledge and belief of Gelest, Inc. accurate and reliable. Such information is offered solely for your consideration, investigation and verification. It is not suggested or guaranteed that the hazard precautions or procedures described are the only ones which exist. Gelest, Inc. makes no warranties, express or implied, with respect to the use of such information and assumes no responsibility therefore. Information on this safety data sheet is not intended to constitute a basis for product specifications.

© 2014 Gelest Inc. Morrisville, PA 19067

