

POTASSIUM METHOXIDE, 3.4M in methanol (24-26%)

Safety Data Sheet AKP646

Date of issue: 01/15/2015

Revision date: 04/03/2015

Version: 1.1

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

1.1. Product identifier

Product form	: Mixture
Physical state	: Liquid
Product name	: POTASSIUM METHOXIDE, 3.4M in methanol (24-26%)
Product code	: AKP646
Formula	: CH ₃ KO
Synonyms	: POTASSIUM METHYLATE
Chemical family	: METAL ALCOHOLATE

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

Use of the substance/mixture	: Chemical intermediate For research and industrial use only
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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 - www.gelest.com

1.4. Emergency telephone number

Emergency number	: CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)
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SECTION 2: Hazards identification

2.1. 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 Corr. 1B	H314
Eye Dam. 1	H318
STOT SE 1	H370
STOT SE 3	H336

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US)



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
 H314 - Causes severe skin burns and eye damage
 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
 P210 - Keep away from heat, open flames, sparks. - 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
 P260 - Do not breathe vapors
 P264 - Wash hands thoroughly after handling
 P270 - Do not eat, drink or smoke when using this product
 P271 - Use only outdoors or in a well-ventilated area

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P301+P310 - If swallowed: Immediately call a POISON CENTER
P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting
P302+P352 - If on skin: Wash with plenty of water
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
P310 - Immediately call a POISON CENTER
P361 - Take off immediately all contaminated clothing
P363 - Wash contaminated clothing before reuse
P370+P378 - In case of fire: Use dry chemical, dry soda ash, alcohol-resistant foam 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.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
Methanol	(CAS No) 67-56-1	> 75	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
Potassium methoxide	(CAS No) 865-33-8	> 25	Self-heat. 1, H251 Skin Corr. 1B, H314 Eye Dam. 1, H318

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. If skin irritation or rash occurs: Get immediate medical advice/attention.
First-aid measures after eye contact	: Immediately flush eyes thoroughly with water for at least 15 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. Call a poison center/doctor/physician if you feel unwell.

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

Symptoms/injuries after inhalation	: May cause drowsiness or dizziness. May cause respiratory irritation. Inhalation will cause sneezing, irritation and burns.
Symptoms/injuries after skin contact	: Causes skin irritation. Worker will notice a slippery feeling on washing.
Symptoms/injuries after eye contact	: Causes serious eye damage.
Symptoms/injuries after ingestion	: Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.
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.

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.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Dry chemical. Dry soda ash. Alcohol-resistant foam.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Highly flammable liquid and vapor. 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 : Protect against caustic dust, smoke and water. Exercise caution when fighting any chemical fire.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Wear pressure demand self-contained breathing apparatus with full facepiece and full protective clothing. 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.

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. Provide good ventilation in process area to prevent accumulation of vapors. Use only in well ventilated areas. Take precautionary measures against static discharge. Use only non-sparking tools.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof electrical equipment.

Storage conditions : Keep container tightly closed. Store under dry nitrogen or argon in sealed containers.

Incompatible materials : Acids. Alcohols. Carbon dioxide. Esters. Halogens. Ketones. Moist 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
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)	260 mg/m ³

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Methanol (67-56-1)		
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 or face shield. Contact lenses should not be worn.
Skin and body protection	: Wear suitable protective clothing.
Respiratory protection	: NIOSH-certified caustic organic vapor (black cartridge) respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear liquid. Slightly viscous.
Molecular mass	: 70.12 g/mol
Color	: Amber.
Odor	: No data available
Odor threshold	: No data available
Refractive index	: 1.37
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: No data available
Freezing point	: < 0 °C
Boiling point	: 65 °C (initial, methanol)
Flash point	: 11 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Highly flammable liquid and vapor
Vapor pressure	: No data available
Relative vapor density at 20 °C	: 1.1 (methanol)
Relative density	: 0.95
VOC content	: < 70 %
Solubility	: Reacts with water. Dissolves.
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 under nitrogen or argon in sealed containers.

10.3. Possibility of hazardous reactions

Reacts slowly with moisture and carbon dioxide in air. Material decomposes slowly in contact with moist air and rapidly in contact with water.

10.4. Conditions to avoid

Heat. Open flame. Sparks.

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10.5. Incompatible materials

Acids. Alcohols. Carbon dioxide. Esters. Halogens. Ketones. Moist air. Water.

10.6. Hazardous decomposition products

Caustic organic vapors. Methanol. Potassium hydroxide.

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.

POTASSIUM METHOXIDE, 3.4M in methanol (24-26%) (865-33-8)	
ATE US (oral)	133.333 mg/kg body weight
ATE US (dermal)	400.000 mg/kg body weight
ATE US (vapors)	4.000 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 severe skin burns and eye damage.
Serious eye damage/irritation	: Causes serious eye damage.
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.
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Symptoms/injuries after inhalation	: May cause drowsiness or dizziness. May cause respiratory irritation. Inhalation will cause sneezing, irritation and burns.
Symptoms/injuries after skin contact	: Causes skin irritation. Worker will notice a slippery feeling on washing.
Symptoms/injuries after eye contact	: Causes serious eye damage.
Symptoms/injuries after ingestion	: Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.
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

12.3. 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.

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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.
- 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

- UN-No.(DOT) : 2924
- DOT NA no. : UN2924

14.2. UN proper shipping name

- Proper Shipping Name (DOT) : Flammable liquids, corrosive, n.o.s.
(POTASSIUM METHOXIDE, 3.4M in methanol (24-26%))
- Hazard Classes (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
- Hazard labels (DOT) : 3 - Flammable liquid
8 - Corrosive



- DOT Symbols : G - Identifies PSN requiring a technical name
- 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) : 243

14.3. Additional information

- Other information : No supplementary information available.

Transport by sea

- DOT Vessel Stowage Location : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a 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 section is exceeded.
- DOT Vessel Stowage Other : 40 - Stow "clear of living quarters"

Air transport

- DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 1 L
- DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 5 L

SECTION 15: Regulatory information

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

SARA Section 313 - Emission Reporting	1.0 %
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Potassium methoxide (865-33-8)

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

15.2. International regulations

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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)

Potassium methoxide (865-33-8)

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 Japanese ISHL (Industrial Safety and Health Law)
 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)

15.3. US State regulations

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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	

Potassium methoxide (865-33-8)

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	

SECTION 16: Other information

Indication of changes : Applied changes to section 1, chemical family.
 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:vapour) Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Flam. Liq. 2	Flammable liquids Category 2
Self-heat. 1	Self-heating substances and mixtures Category 1
Skin Corr. 1B	Skin corrosion/irritation Category 1B
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT SE 1	Specific target organ toxicity (single exposure) Category 1

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STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H225	Highly flammable liquid and vapor
H251	Self-heating: may catch fire
H301	Toxic if swallowed
H311	Toxic in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H318	Causes serious eye damage
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.

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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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