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

1.1. Product identifier

Product form: Substance
Physical state: Solid
Substance name: POTASSIUM 2-METHYL-2-BUTOXIDE, 96%
Product code: AKP647
Formula: C5H11KO
Synonyms: POTASSIUM t-AMYLATE
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

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)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification
- Flam. Sol. 2 H228
- Skin Corr. 1B H314
- Eye Dam. 1 H318

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling
- Hazard pictograms (GHS-US):
  - GHS02
  - GHS05

Signal word (GHS-US): Danger
Hazard statements (GHS-US):
- H228 - Flammable solid
- H314 - Causes severe skin burns and eye damage
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
- P260 - Do not breathe dust
- P261 - Avoid contact with skin and eyes
- P301+P330+P331 - If swallowed: Rinse mouth. Do NOT induce vomiting
- P303+P361+P338 - 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 doctor
- P321 - Specific treatment (see first aid instructions on this label)
- P362 - Wash contaminated clothing before reuse
- P370+P378 - In case of fire: Use dry chemical, dry soda ash or dry sodium chloride to extinguish
- P405 - Store locked up
- P501 - Dispose of contents/container to licensed waste disposal facility.
POTASSIUM 2-METHYL-2-BUTOXIDE, 96%
Safety Data Sheet

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

<table>
<thead>
<tr>
<th>Substance type</th>
<th>Name</th>
<th>CAS No</th>
<th>EC no</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mono-constituent</td>
<td>POTASSIUM 2-METHYL-2-BUTOXIDE, 96%</td>
<td>41233-93-6</td>
<td>255-272-5</td>
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<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium 2-methyl-2-butoxide</td>
<td>(CAS No) 41233-93-6</td>
<td>95 - 100</td>
<td>Flam. Sol. 2, H228 Skin Corr. 1B, H314 Eye Dam. 1, H318</td>
</tr>
</tbody>
</table>

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. 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 immediate 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: Causes severe skin burns and eye damage.

Symptoms/injuries after inhalation: Inhalation will cause sneezing, irritation and burns.

Symptoms/injuries after skin contact: Causes (severe) skin burns. If skin and air are dry, powder on skin may not cause irritation or burns. Worker will notice a slippery feeling on washing. However, if moisture is present, the powder can cause severe burns.

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

Symptoms/injuries after ingestion: May be harmful if swallowed.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Dry chemical. Dry soda ash. Dry sodium chloride.

Unsuitable extinguishing media: Do not use water or carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Fire hazard: Flammable solid. Irritating fumes and caustic vapors may develop when material is exposed to elevated temperatures or open flame.

5.3. Advice for firefighters

Firefighting instructions: Exercise caution when fighting any chemical fire. Protect against caustic dust, smoke and water.

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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

6.1.1. For non-emergency personnel

Protective equipment: Wear protective equipment as described in Section 8.

Emergency procedures: Evacuate unnecessary personnel.
POTASSIUM 2-METHYL-2-BUTOXIDE, 96%
Safety Data Sheet

6.1.2. For emergency responders

Protective equipment: Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: “Exposure controls/personal protection”.

Emergency procedures: Ventilate area.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

For containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

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/sparks/open flames/hot surfaces. - No smoking.

Precautions for safe handling: Avoid contact with skin and eyes. Do not breathe dust. Avoid dust formation. Ground containers when handling powder. Provide local exhaust or general room ventilation to minimize exposure to dust. Use only non-sparking tools.

Hygiene measures: Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures: Use explosion-proof electrical equipment.

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


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

No additional information available

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. Long-sleeved fire-resistant lab uniform or coverall is recommended.

Respiratory protection: Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. 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: Solid

Appearance: Powder.

Molecular mass: 126.24 g/mol

Color: White to off-white.

Odor: No data available

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: > 160 °C decomposes

Freezing point: No data available
Boiling point: > 200 °C decomposes
Flash point: No data available
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Flammability (solid, gas): Flammable solid
Vapor pressure: ≈ 1 mm Hg @ 220°C
Relative vapor density at 20 °C: No data available
Relative density: ≈ 1
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
Explosion 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 under nitrogen or argon in sealed containers.

10.3. Possibility of hazardous reactions
Material decomposes slowly in contact with moist air and rapidly in contact with water.

10.4. Conditions to avoid
Heat. Open flame. Sparks.

10.5. Incompatible materials

10.6. Hazardous decomposition products
Caustic organic vapors. 2-Methyl-2-butanol. Potassium hydroxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity: Not classified
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): Not classified
Specific target organ toxicity (repeated exposure): Not classified

Aspiration hazard: Not classified
Symptoms/injuries after inhalation: Inhalation will cause sneezing, irritation and burns.
Symptoms/injuries after skin contact: Causes (severe) skin burns. If skin and air are dry, powder on skin may not cause irritation or burns. Worker will notice a slippery feeling on washing. However, if moisture is present, the powder can cause severe burns.
Symptoms/injuries after eye contact: Causes serious eye damage.
Symptoms/injuries after ingestion: May be harmful if swallowed.
Reason for classification: Expert judgment
# SECTION 12: Ecological information

## 12.1. Toxicity

Ecology - general: Toxic to aquatic life.

## 12.2. Persistence and degradability

No additional information available

## 12.3. Bioaccumulative potential

No additional information available

## 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

Sewage disposal recommendations: Do not dispose of waste into sewer.
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): 2925
DOT NA no.: UN2925

## 14.2. UN proper shipping name

Proper Shipping Name (DOT): Flammable solids, corrosive, organic, n.o.s. (POTASSIUM 2-METHYL-2-BUTOXIDE)
Hazard labels (DOT): 4.1 - Flammable solid 8 - Corrosive

DOT Symbols: G - Identifies PSN requiring a technical name
Packing group (DOT): II - Medium Danger
DOT Packaging Exceptions (49 CFR 173.xxx): None
DOT Packaging Non Bulk (49 CFR 173.xxx): 212
DOT Packaging Bulk (49 CFR 173.xxx): 242

## 14.3. Additional information

Other information: No supplementary information available.

### Transport by sea

DOT Vessel Stowage Location: D - The material must be stowed “on deck only” 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, but the material is prohibited on passenger vessels in which the limiting number of passengers is exceeded.

DOT Vessel Stowage Other: 40 - Stow “clear of living quarters”

### Air transport

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27): 15 kg
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75): 50 kg
SECTION 15: Regulatory information

15.1. US Federal regulations

Potassium 2-methyl-2-butoxide (41233-93-6)

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

15.2. International regulations

- Listed on the Canadian NDSL (Non-Domestic Substances List)
- 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)

15.3. US State regulations

<table>
<thead>
<tr>
<th>POTASSIUM 2-METHYL-2-BUTOXIDE, 96% (41233-93-6)</th>
<th>U.S. - California - Proposition 65 - Carcinogens List</th>
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<tbody>
<tr>
<td></td>
<td>U.S. - California - Proposition 65 - Developmental</td>
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<td>U.S. - California - Proposition 65 - Reproductive</td>
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<td>Toxicity - Female</td>
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<td></td>
<td>U.S. - California - Proposition 65 - Reproductive</td>
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<td>Toxicity - Male</td>
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</tr>
</tbody>
</table>

| Non-significant risk level (NSRL) |

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:

| Eye Dam. 1 | Serious eye damage/eye irritation Category 1 |
| Flam. Sol. 2 | Flammable solids Category 2 |
| Skin Corr. 1B | Skin corrosion/irritation Category 1B |
| H228 | Flammable solid |
| H314 | Causes severe skin burns and eye damage |
| H318 | Causes serious eye damage |

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: 12/01/2015
Version: 1.0

SDS US (GHS HazCom 2012) - Custom

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

12/01/2015  EN (English US)  SDS ID: AKP647 6/7
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