### SECTION 1: Identification

<table>
<thead>
<tr>
<th>1.1. Product identifier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product name</strong></td>
</tr>
<tr>
<td><strong>Product code</strong></td>
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<tr>
<td><strong>Product form</strong></td>
</tr>
<tr>
<td><strong>Physical state</strong></td>
</tr>
<tr>
<td><strong>Formula</strong></td>
</tr>
<tr>
<td><strong>Synonyms</strong></td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
</tr>
<tr>
<td><strong>Chemical family</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1.2. Recommended use of the chemical and restrictions on use</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recommended use</strong></td>
</tr>
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<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>1.3. Details of the supplier of the safety data sheet</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GELEST, INC.</strong></td>
</tr>
<tr>
<td>11 East Steel Road</td>
</tr>
<tr>
<td>Morrisville, PA 19067</td>
</tr>
<tr>
<td>USA</td>
</tr>
<tr>
<td>T 215-547-1015 - F 215-547-2484 : (M-F): 8:00 AM - 5:30 PM EST</td>
</tr>
<tr>
<td><a href="mailto:info@gelest.com">info@gelest.com</a> - <a href="http://www.gelest.com">www.gelest.com</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1.4. Emergency telephone number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Emergency number</strong></td>
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</tbody>
</table>

### SECTION 2: Hazard(s) identification

<table>
<thead>
<tr>
<th>2.1. Classification of the substance or mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GHS-US classification</strong></td>
</tr>
<tr>
<td>Acute toxicity (oral) Category 3</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation Category 2A</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure) Category 3</td>
</tr>
<tr>
<td>Full text of H statements : see section 16</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2.2. Label elements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GHS-US labeling</strong></td>
</tr>
<tr>
<td>Hazard pictograms (GHS-US)</td>
</tr>
<tr>
<td>Signal word (GHS-US)</td>
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<tr>
<td>Hazard statements (GHS-US)</td>
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<tr>
<td>Precautionary statements (GHS-US)</td>
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</tbody>
</table>
POTASSIUM HEXAFLUOROSILICATE
Safety Data Sheet

2.3. Hazards not otherwise classified (HNOC)
No additional information available

2.4. Unknown acute toxicity (GHS US)
No data available

SECTION 3: Composition/Information on ingredients

3.1. Substances
Substance type: Mono-constituent
Name: POTASSIUM HEXAFLUOROSILICATE
CAS No: 16871-90-2

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium fluosilicate</td>
<td>(CAS No) 16871-90-2</td>
<td>98 - 100</td>
<td>Acute Tox. 3 (Oral), H301</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Irrit. 2A, H319</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>STOT SE 3, H335</td>
</tr>
</tbody>
</table>

Full text of hazard classes and H-statements: see section 16

3.2. Mixtures
Not applicable

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. Immediately call a poison center or doctor/physician.

First-aid measures after skin contact: Wash with plenty of soap and water. Immediately call a poison center or doctor/physician.

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. Immediately call a poison center or doctor/physician.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms/injuries after inhalation: May cause respiratory irritation. May be harmful if inhaled. Overexposure causes inflammation and edema of the larynx and bronchi. Symptoms of exposure are a burning sensation, coughing, wheezing and laryngitis.

Symptoms/injuries after skin contact: May be harmful in contact with skin. Material is extremely destructive to mucous membranes.

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.

Chronic symptoms: May cause osteofluorosis.

4.3. Indication of any immediate medical attention and special treatment needed
Note to Physician: Calcium gluconate is often considered in topical exposures to hyrofluoric acid and may be appropriate for severe exposures to fluorosilicates.

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media: Not flammable.

Unsuitable extinguishing media: None known.

5.2. Special hazards arising from the substance or mixture
Fire hazard: Irritating fumes vapors may develop when material is mixed with other materials and exposed to elevated temperatures or open flame.

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 contact with skin and eyes. Do not breathe dust.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel
Protective equipment: Wear protective equipment as described in Section 8.

Emergency procedures: Evacuate unnecessary personnel.
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”.

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
For containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
Methods for cleaning up: Sweep or shovel spills into appropriate container for disposal.

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
Precautions for safe handling: Avoid contact with skin and eyes. Avoid dust formation. Do not breathe dust. Use only outdoors or in a well-ventilated area.
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
Storage conditions: Keep container tightly closed. Store locked up.
Incompatible materials: Compatible with most materials.
Storage area: Store in a well-ventilated place. Store away from heat.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Potassium fluorosilicate (16871-90-2)</th>
<th>OSHA</th>
<th>OSHA PEL (TWA) (mg/m³)</th>
<th>2.5 mg/m³ inorganic fluoride as F</th>
</tr>
</thead>
</table>

8.2. Exposure controls
Appropriate engineering controls: Handle in an enclosing hood with exhaust 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. NIOSH-certified combination dust mask/acid gas (yellow cartridge) respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties
Physical state: Solid
Appearance: Powder.
Molecular mass: 220.29 g/mol
Color: White.
Odor: No data available
Odor threshold: No data available
Refractive index: 1.3991
pH: No data available
Relative evaporation rate (butyl acetate=1): No data available
Melting point: No data available
Freezing point: No data available
Boiling point: No data available
Flash point: No data available
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Flammability (solid, gas): Not flammable
Vapor pressure: No data available
Relative vapor density at 20 °C: No data available
Relative density: 2.67
Solubility: Water: 1.2 g/l @ 17°C
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.

10.3. Possibility of hazardous reactions
Dissolves in strong acid or base.

10.4. Conditions to avoid
No additional information available

10.5. Incompatible materials
Compatible with most materials.

10.6. Hazardous decomposition products
Hydrogen fluoride.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity: Oral: Toxic if swallowed.

<table>
<thead>
<tr>
<th>POTASSIUM HEXAFLUOROSILICATE (16871-90-2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE US (oral)</td>
</tr>
<tr>
<td>Potassium fluorosilicat (16871-90-2)</td>
</tr>
<tr>
<td>LD50 oral rat</td>
</tr>
<tr>
<td>LD50 oral mouse</td>
</tr>
<tr>
<td>LD50 oral guinea pig</td>
</tr>
<tr>
<td>ATE US (oral)</td>
</tr>
</tbody>
</table>

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

None of the components in this product at concentrations >0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen

Reproductive toxicity: Not classified
Specific target organ toxicity – single exposure: May cause respiratory irritation.
Specific target organ toxicity – repeated exposure: Not classified
Aspiration hazard: Not classified
Symptoms/injuries after inhalation: May cause respiratory irritation. May be harmful if inhaled. Overexposure causes inflammation and edema of the larynx and bronchii. Symptoms of exposure are a burning sensation, coughing, wheezing and laryngitis.
Symptoms/injuries after skin contact: May be harmful in contact with skin. Material is extremely destructive to mucous membranes.
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.
- May cause osteofluorosis.
- Expert judgment

## SECTION 12: Ecological information

### 12.1. Toxicity
No additional information available

### 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
- This substance may be hazardous to the environment.
- No additional information available
- No known effects from this product.
- No known effects from this product.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods
- Do not dispose of waste into sewer.
- Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.
- Avoid release to the environment.

## SECTION 14: Transport information

### 14.1. UN number
- UN-No.(DOT) 2853
- DOT NA no. UN2853

### 14.2. UN proper shipping name
- UN2853 Magnesium fluorosilicate, 6.1, III
- Magnesium fluorosilicate
- 6.1 - Class 6.1 - Poisonous materials 49 CFR 173.132
- III - Minor Danger
- 6.1 - Poison

### 14.3. Additional information
- 151
- No supplementary information available.

### Transport by sea
- A - The material may be stowed “on deck” or “under deck” on a cargo vessel and on a passenger vessel
- 52 - Stow “separated from” acids

### Air transport
- 100 kg
- (49 CFR 173.27)
POTASSIUM HEXAFLUOROSILICATE  
Safety Data Sheet

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75): 200 kg

SECTION 15: Regulatory information

15.1. US Federal regulations

Potassium fluorosilicat (16871-90-2)  
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

Potassium fluorosilicat (16871-90-2)  
Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification: Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects

EU-Regulations

Potassium fluorosilicat (16871-90-2)  
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

Potassium fluorosilicat (16871-90-2)  
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
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 INSQ (Mexican National Inventory of Chemical Substances)
Listed on CICR (Turkish Inventory and Control of Chemicals)

15.3. US State regulations

Potassium fluorosilicat (16871-90-2)  
U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

Full text of H-phrases:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H301</td>
<td>Toxic if swallowed</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation</td>
</tr>
</tbody>
</table>

Abbreviations and acronyms: 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; GHS: The Globally Harmonized System of Classification and Labelling.

HMIS III Rating

Health: 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given
Flammability: 0 Minimal Hazard - Materials that will not burn
Physical: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Prepared by safety and environmental affairs.

Date of issue: 12/29/2016  
Version: 1.0

SDS US (GHS HazCom 2012) - Custom
POTASSIUM HEXAFLUOROSILICATE
Safety Data Sheet

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

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