



# POTASSIUM HEXAFLUOROSILICATE

Safety Data Sheet SIP6885.0

Date of issue: 12/29/2016

Version: 1.0

## SECTION 1: Identification

### 1.1. Product identifier

Product name : POTASSIUM HEXAFLUOROSILICATE  
 Product code : SIP6885.0  
 Product form : Substance  
 Physical state : Solid  
 Formula : F6K2Si  
 Synonyms : POTASSIUM SILICOFLUORIDE  
 ALKALI FLUOROSILICATES(K)  
 DIPOTASSIUM HEXAFLUOROSILICATE  
 Chemical family : FLUOROSILICATE

### 1.2. Recommended use of the chemical and restrictions on use

Recommended use : 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](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: Hazard(s) identification

### 2.1. Classification of the substance or mixture

#### GHS-US classification

Acute toxicity (oral) Category 3 H301  
 Serious eye damage/eye irritation Category 2A H319  
 Specific target organ toxicity (single exposure) Category 3 H335  
 Full text of H statements : see section 16

### 2.2. Label elements

#### GHS-US labeling

Hazard pictograms (GHS-US) :



GHS06



GHS07

Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H301 - Toxic if swallowed  
 H319 - Causes serious eye irritation  
 H335 - May cause respiratory irritation

Precautionary statements (GHS-US) :

P280 - Wear protective gloves/protective clothing/eye protection/face protection  
 P261 - Avoid breathing dust  
 P312 - Call a POISON CENTER if you feel unwell  
 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  
 P301+P310 - If swallowed: Immediately call a POISON CENTER  
 P330 - Rinse mouth  
 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  
 P337+P313 - If eye irritation persists: Get medical advice/attention  
 P321 - Specific treatment (see first aid instructions on this label)  
 P403+P233 - Store in a well-ventilated place. Keep container tightly closed  
 P405 - Store locked up  
 P501 - Dispose of contents/container to licensed waste disposal facility

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### 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

Name	Product identifier	%	GHS-US classification
Potassium fluorosilicat	(CAS No) 16871-90-2	98 - 100	Acute Tox. 3 (Oral), H301 Eye Irrit. 2A, H319 STOT SE 3, H335

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 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.

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 hydrofluoric 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.

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### 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

Potassium fluorosilicat (16871-90-2)		
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup> inorganic fluoride as F

### 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

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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.

POTASSIUM HEXAFLUOROSILICATE (16871-90-2)	
ATE US (oral)	156.000 mg/kg body weight
Potassium fluorosilicat (16871-90-2)	
LD50 oral rat	156 mg/kg RTECS Number: VV8400000
LD50 oral mouse	70 mg/kg
LD50 oral guinea pig	500 mg/kg
ATE US (oral)	156.000 mg/kg body weight

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.

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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.
Reason for classification	: 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

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 effects from this product.
GWPmix comment	: No known effects from 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.
Ecology - waste materials	: 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

Transport document description	: UN2853 Magnesium fluorosilicate, 6.1, III
Proper Shipping Name (DOT)	: Magnesium fluorosilicate
Class (DOT)	: 6.1 - Class 6.1 - Poisonous materials 49 CFR 173.132
Packing group (DOT)	: III - Minor Danger
Hazard labels (DOT)	: 6.1 - Poison



DOT Packaging Non Bulk (49 CFR 173.xxx)	: 213
DOT Packaging Bulk (49 CFR 173.xxx)	: 240
DOT Packaging Exceptions (49 CFR 173.xxx)	: 153

#### 14.3. Additional information

Emergency Response Guide (ERG) Number	: 151
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
DOT Vessel Stowage Other	: 52 - Stow "separated from" acids

#### Air transport

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 100 kg
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DOT Quantity Limitations Cargo aircraft only (49 : 200 kg  
CFR 175.75)

### 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 CIGR (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::

H301	Toxic if swallowed
H319	Causes serious eye irritation
H335	May cause respiratory irritation

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; 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

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

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