

POTASSIUM FLUOROBORATE

Revision Date 01/18/2018

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

- Trade name POTASSIUM FLUOROBORATE
- Synonyms Potassium tetrafluoroborate
- Molecular formula KBF₄

1.2 Relevant identified uses of the substance or mixture and uses advised against**Uses of the Substance / Mixture**

- Metallurgy.
- Chemical industry
- Abrasive

1.3 Details of the supplier of the safety data sheet**Company**

SOLVAY FLUORIDES, LLC
3737 Buffalo Speedway,
Suite 800,
Houston, TX 77098
USA
Tel: 800-515-6065

1.4 Emergency telephone

FOR EMERGENCIES INVOLVING A SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CONTACT CHEMTREC (24-Hour Number): 800-424-9300 within the United States and Canada, or 703-527-3887 for international collect calls.

SECTION 2: Hazards identification

Although OSHA has not adopted the environmental portion of the GHS regulations, this document may include information on environmental effects.

2.1 Classification of the substance or mixture**HCS 2012 (29 CFR 1910.1200)**

- Not a hazardous product according to the OSHA Globally Harmonized System (GHS).

2.2 Label elements**HCS 2012 (29 CFR 1910.1200)**

- Not a hazardous product according to the OSHA Globally Harmonized System (GHS).

2.3 Other hazards which do not result in classification

None identified

SECTION 3: Composition/information on ingredients**3.1 Substance**

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Hazardous Ingredients and Impurities

- No ingredients are hazardous.

3.2 Mixture

Not applicable, this product is a substance.

SECTION 4: First aid measures**4.1 Description of first-aid measures****In case of inhalation**

- Move to fresh air.
- If symptoms persist, call a physician.

In case of skin contact

- Wash off with soap and water.

In case of eye contact

- In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
- If eye irritation persists, consult a specialist.

In case of ingestion

- Rinse mouth with water.
- Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed**In case of inhalation****Effects**

- May cause nose, throat, and lung irritation.

In case of skin contact**Effects**

- Prolonged skin contact may cause skin irritation.

In case of eye contact**Effects**

- May cause eye irritation.

In case of ingestion**Effects**

- Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

4.3 Indication of any immediate medical attention and special treatment needed**Notes to physician**

- If accidentally swallowed obtain immediate medical attention.
- When symptoms persist or in all cases of doubt seek medical advice.

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SECTION 5: Firefighting measures

<u>Flash point</u>	Not applicable
<u>Autoignition temperature</u>	not auto-flammable
<u>Flammability / Explosive limit</u>	No data available

5.1 Extinguishing media**Suitable extinguishing media**

- Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

- None known.

5.2 Special hazards arising from the substance or mixture**Specific hazards during fire fighting**

- Hazardous decomposition products formed under fire conditions.

Hazardous combustion products:

- Hydrogen fluoride

5.3 Advice for firefighters**Special protective equipment for fire-fighters**

- Exposure to decomposition products may be a hazard to health.
- In the event of fire, wear self-contained breathing apparatus.
- Use personal protective equipment.
- Cool containers/tanks with water spray.
- Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures****Advice for non-emergency personnel**

- Evacuate personnel to safe areas.
- Avoid dust formation.

Advice for emergency responders

- Use personal protective equipment.
- Sweep up to prevent slipping hazard.
- Prevent further leakage or spillage.

6.2 Environmental precautions

- Should not be released into the environment.
- Do not flush into surface water or sanitary sewer system.

6.3 Methods and materials for containment and cleaning up

- Pick up and transfer to properly labeled containers.
- Keep in suitable, closed containers for disposal.

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6.4 Reference to other sections

- Refer to protective measures listed in sections 7 and 8.

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

- Ensure adequate ventilation.
- Keep away from heat and sources of ignition.
- Keep away from incompatible products

Hygiene measures

- Eye wash bottles or eye wash stations in compliance with applicable standards.
- When using do not eat, drink or smoke.
- Wash hands before breaks and at the end of workday.
- Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities**Technical measures/Storage conditions**

- Store in original container.
- Keep in a well-ventilated place.
- Keep in a dry place.
- Keep in properly labeled containers.
- Keep container closed.

- Keep away from:
- Incompatible products

Packaging material**Suitable material**

- Paper.
- Polyethylene
- Conductive PE + carton

Unsuitable material

- No data available

7.3 Specific end use(s)

- Contact your supplier for additional information

SECTION 8: Exposure controls/personal protection

Introductory Remarks: These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers.

8.1 Control parameters

- Contains no substances with occupational exposure limit values above their regulatory reporting threshold.

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8.2 Exposure controls**Control measures****Engineering measures**

- Provide appropriate exhaust ventilation at places where dust is formed.
- Apply technical measures to comply with the occupational exposure limits.

Individual protection measures**Respiratory protection**

- Use only respiratory protection that conforms to international/ national standards.
- Respirator with a particle filter (EN 143)
- Use NIOSH approved respiratory protection.

Hand protection

- Wear suitable gloves.
- Neoprene
- PVC

Eye protection

- Safety goggles

Skin and body protection

- Dust impervious protective suit

Hygiene measures

- Eye wash bottles or eye wash stations in compliance with applicable standards.
- When using do not eat, drink or smoke.
- Wash hands before breaks and at the end of workday.
- Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: Physical and chemical properties

Physical and Chemical properties here represent typical properties of this product. Contact the business area using the Product information phone number in Section 1 for its exact specifications.

9.1 Information on basic physical and chemical properties**Appearance**

Form: powder, crystalline
Physical state: solid
Color: white
Particle size: 2.75 µm
d 10
22.45 µm
d 50
41.87 µm
d 90

Odor

odorless

Odor Threshold

No data available

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<u>Molecular weight</u>	125.9 g/mol
<u>pH</u>	3.0 saturated aqueous solution
	<u>pKa:</u> Not applicable
<u>Melting point/freezing point</u>	<u>Melting point/range:</u> 986 °F (530 °C) <u>Decomposition:</u> Decomposes before melting.
<u>Initial boiling point and boiling range</u>	<u>Boiling point/boiling range:</u> Not applicable
<u>Flash point</u>	Not applicable
<u>Evaporation rate (Butylacetate = 1)</u>	Not applicable
<u>Flammability (solid, gas)</u>	The product is not flammable.
<u>Flammability / Explosive limit</u>	<u>Explosiveness:</u> Not explosive
<u>Autoignition temperature</u>	not auto-flammable
<u>Vapor pressure</u>	Not applicable
<u>Vapor density</u>	Not applicable
<u>Density</u>	2.505 g/cm ³ (68 °F (20 °C)) <u>Bulk density:</u> 1,100 kg/m ³
<u>Relative density</u>	2.505 (68 °F (20 °C))
<u>Solubility</u>	<u>Water solubility:</u> 5.40 g/l (72 °F (22 °C))(pH: 3) soluble
<u>Partition coefficient: n-octanol/water</u>	Not applicable
<u>Decomposition temperature</u>	>= 986 °F (>= 530 °C)
<u>Viscosity</u>	<u>Viscosity, dynamic :</u> Not applicable
<u>Explosive properties</u>	No data available
<u>Oxidizing properties</u>	Not considered as oxidizing.

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9.2 Other information

No data available

SECTION 10: Stability and reactivity**10.1 Reactivity**

- None known.

10.2 Chemical stability

- Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

- None known.

10.4 Conditions to avoid

- Heat.

10.5 Incompatible materials

- Incompatible with strong acids and bases.
- Water
- Water reactive

10.6 Hazardous decomposition products

- Hydrogen fluoride

SECTION 11: Toxicological information**11.1 Information on toxicological effects****Acute toxicity****Acute oral toxicity** No data available**Acute inhalation toxicity** No data available**Acute dermal toxicity** No data available**Acute toxicity (other routes of administration)** No data available**Skin corrosion/irritation** No data available**Serious eye damage/eye irritation** No data available**Respiratory or skin sensitization** No data available

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Mutagenicity**Genotoxicity in vitro** No data available**Genotoxicity in vivo** No data available**Carcinogenicity** No data available

This product does not contain any ingredient designated as probable or suspected human carcinogens by:

NTP
IARC
OSHA

Toxicity for reproduction and development**Toxicity to reproduction / fertility** No data available**Developmental Toxicity/Teratogenicity** No data available**STOT****STOT-single exposure** No data available**STOT-repeated exposure** No data available**Experience with human exposure** No data available**Aspiration toxicity** Not applicable**SECTION 12: Ecological information****12.1 Toxicity****Aquatic Compartment****Acute toxicity to fish** No data available**Acute toxicity to daphnia and other aquatic invertebrates.** No data available**Toxicity to aquatic plants** No data available**Toxicity to microorganisms** No data available**Chronic toxicity to fish** No data available

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Chronic toxicity to daphnia and other aquatic invertebrates. No data available

Chronic Toxicity to aquatic plants No data available

12.2 Persistence and degradability

Abiotic degradation No data available

Physical- and photo-chemical elimination No data available

Biodegradation No data available

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water No data available

Bioconcentration factor (BCF) No data available

12.4 Mobility in soil

Adsorption potential (Koc) No data available

Known distribution to environmental compartments No data available

12.5 Results of PBT and vPvB assessment Not applicable

12.6 Other adverse effects No data available

SECTION 13: Disposal considerations**13.1 Waste treatment methods****Product Disposal**

- In accordance with local and national regulations.
- Refer to manufacturer/supplier for information on recovery/recycling.
- Dilute with plenty of water.
- Can be eliminated from water by precipitation.
- Filtrate the product and send the cake to a landfill for industrial waste.
- After neutralization, the filtrate can be discharged in the sewer.

Waste Code

- Environmental Protection Agency

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- Hazardous Waste – NO

Advice on cleaning and disposal of packaging

- Clean container with water.
- The empty and clean containers are to be reused in conformity with regulations.
- To avoid treatments, as far as possible, use dedicated containers.

SECTION 14: Transport information

DOT

not regulated

TDG

not regulated

NOM

not regulated

IMDG

not regulated

IATA

not regulated

Note: The above regulatory prescriptions are those valid on the date of publication of this sheet. Given the possible evolution of transportation regulations for hazardous materials, it would be advisable to check their validity with your sales office.

SECTION 15: Regulatory information

15.1 Notification status

Inventory Information	Status
Mexico INSQ (INSQ)	- In compliance with the inventory
New Zealand. Inventory of Chemical Substances	- In compliance with the inventory
EU. European Registration, Evaluation, Authorisation and Restriction of Chemical (REACH)	- If product is purchased from Solvay in Europe it is in compliance with REACH, if not please contact the supplier.

15.2 Federal Regulations

US. EPA EPCRA SARA Title III

SARA HAZARD DESIGNATION SECTIONS 311/312 (40 CFR 370)

No SARA Hazards

Section 313 Toxic Chemicals (40 CFR 372.65)

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

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Section 302 Emergency Planning Extremely Hazardous Substance Threshold Planning Quantity (40 CFR 355)

This material does not contain any components with a section 302 EHS TPQ.

Section 302 Emergency Planning Extremely Hazardous Substance Reportable Quantity (40 CFR 355)

This material does not contain any components with a SARA 302 RQ.

Section 304 Emergency Release Notification Reportable Quantity (40 CFR 355)

This material does not contain any components with a section 304 EHS RQ.

US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

This material does not contain any components with a CERCLA RQ.

15.3 State Regulations**US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)**

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

SECTION 16: Other information**NFPA (National Fire Protection Association) - Classification**

Health	0 minimal
Flammability	0 minimal
Instability or Reactivity	0 minimal
Special Notices	None

HMIS (Hazardous Materials Identification System (Paint & Coating)) - Classification

Health	0 minimal
Flammability	0 minimal
Reactivity	0 minimal
PPE	Determined by User; dependent on local conditions

Further information

- Product evaluated under the US GHS format.

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- ACGIH American Conference of Governmental Industrial Hygienists
- OSHA Occupational Safety and Health Administration
- NTP National Toxicology Program
- IARC International Agency for Research on Cancer
- NIOSH National Institute for Occupational Safety and Health

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. Such information is only given as a guidance to help the user handle, use, process, store, transport, dispose, and release the product in satisfactory safety conditions and is not to be considered as a warranty or quality specification. It should be used in conjunction with technical sheets but do not replace them. Thus, the information only relates to the designated specific product and may not be applicable if such product is used in combination with other materials or in any other manufacturing process, unless otherwise specifically indicated. It does not release the user from ensuring he is in conformity with all regulations linked to its activity.