

SHORECHEM, LLC
MATERIAL SAFETY DATA SHEET
Potassium Bifluoride

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Potassium Bifluoride

OTHER/GENERIC NAMES: Potassium acid fluoride, Potassium hydrogen fluoride, Potassium hydrogen difluoride

PRODUCT CODES: 194-2146, 194-2177

PRODUCT USE: Metal finishing, glass manufacture, petrochemical and industrial chemical manufacturing.

DISTRIBUTOR: ShoreChem, LLC
12 Route 17 North, Suite 309
Paramus, NJ 07652

TELEPHONE: (201) 845-4666
(Monday-Friday, 8:30 AM – 5:00 PM)

CHEMTREC PHONE: 1800-424-9300
(24 Hours/Day, 7 Days/Week)

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENT NAME:</u>	<u>CAS NO.</u>	<u>% WT</u>
Potassium Bifluoride	7789-29-9	100

Trace impurities and additional material names not listed above may also appear in Section 15 towards the end of the MSDS. These materials may be listed for local "Right-to-Know" compliance and for other reasons.

OSHA Hazard Communication Standard: *This product is considered hazardous under the OSHA Hazard Communication Standard*

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: White crystalline solid with an acidic odor. Toxic if swallowed or if large quantities of dust are inhaled. Causes irritation and/or burns to skin and eyes. Can release toxic and corrosive hydrofluoric acid vapors if involved in a fire.

POTENTIAL HEALTH HAZARDS

EYES: Can irritate or burn the eyes. Prolonged contact may result in permanent damage including blindness .

SKIN: Can irritate or burn the skin. Prolonged contact may lead to symptoms similar to ingestion.

INGESTION: Toxic and possibly fatal if swallowed. Symptoms may include salivation, nausea, vomiting, diarrhea, abdominal pain and coma.

INHALATION: Inhalation of dusts or mists can cause irritation. Prolonged inhalation can cause effects similar to ingestion.

DELAYED EFFECTS: Prolonged or repeated swallowing can cause kidney effects and increased bone density.

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Ingredients found on one of the three OSHA designated carcinogen lists are listed below.

<u>INGREDIENT NAME</u>	<u>NTP STATUS</u>	<u>IARC STATUS</u>	<u>OSHA LIST</u>
No ingredients listed in this section			

SECTION 4: FIRST AID MEASURES

SKIN: Promptly wash with soap and water, rinsing until clean. Remove contaminated clothing and wash before reuse. Get medical attention for irritation or burns.

EYES: Immediately flush with running water for at least 15 minutes. Get immediate medical assistance.

INHALATION: Remove to fresh air. If not breathing, apply mouth to mouth artificial respiration. Get medical assistance.

INGESTION: Do not induce vomiting. If conscious, give milk (preferred) or water. Get immediate medical assistance.

ADVICE TO PHYSICIAN: Fluorides can reduce serum calcium levels resulting in potentially fatal hypocalcemia. Potassium can reduce blood pressure and cause coma.

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT:	Not flammable
FLASH POINT METHOD:	Not applicable
AUTOIGNITION TEMPERATURE:	Not applicable
UPPER FLAME LIMIT (volume % in air)	Not applicable
LOWER FLAME LIMIT (volume % in air)	Not applicable
FLAME PROPAGATION RATE (solids)	Not applicable

EXTINGUISHING MEDIA:

Fight surrounding fires with any standard agent.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

None anticipated.

SPECIAL FIRE FIGHTING PRECAUTIONS/INSTRUCTIONS:

Wear self contained breathing apparatus. Avoid contact with dusts and product mists.

SECTION 6: ACCIDENTAL RELEASE MEASURES

IN CASE OF SPILL OR OTHER RELEASE: (See section 8 for recommended personal protective equipment.) Sweep up and place into labeled containers for disposal. Remaining residue may be cautiously rinsed with water.

Spills and releases may have to be reported to Federal and/or local authorities. See section 15 regarding reporting requirements.

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SECTION 7: HANDLING AND STORAGE

NORMAL HANDLING: (See section 8 for recommended personal protective equipment.)
Avoid contact with skin, eyes and clothing. Wash thoroughly after handling.

STORAGE RECOMMENDATIONS:

Store in a well-ventilated area away from water, acids and alkalis. Keep containers closed during storage.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:

Local exhaust ventilation recommended for product transfer areas or other areas where dusty conditions may exist.

PERSONAL PROTECTIVE EQUIPMENT

SKIN PROTECTION:	Glove and work clothing. Impervious gloves and protective clothing should be worn if working with product solutions.
EYE PROTECTION:	Chemical safety glasses. Wear chemical safety goggles in dusty conditions or if product mists are present.
RESPIRATORY PROTECTION	For dusty conditions, use a NIOSH approved dust respirator.
ADDITIONAL RECOMMENDATIONS	Source of running water and eye wash are appropriate.

EXPOSURE GUIDELINES:

<u>INGREDIENT NAME</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER LIMIT</u>
Potassium fluoride (as fluoride)	2.5 mg/m ³ (as F) TWA	2.5 mg/m ³ (as F) TWA	F in urine: 3 mg/g creatinine pre shift, 10 mg/g postshift. ³

¹ = Limit established by Industry Standard.
² = Workplace Environmental Exposure Level (AIHA).
³ = Biological Exposure Index (ACGIH).

OTHER EXPOSURE LIMITS FOR POTENTIAL DECOMPOSITION PRODUCTS:

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	White Crystals
PHYSICAL STATE:	Solid
MOLECULAR WEIGHT:	78.11
CHEMICAL FORMULA:	KHF ₂
ODOR:	Acidic
SPECIFIC GRAVITY (H₂O = 1):	2.37

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SOLUBILITY IN WATER (weight %):	28 at 70°F
pH:	Solid Material
BOILING POINT:	Decomposes at 824 °F
MELTING POINT:	~437°F Starts to decompose
VAPOR PRESSURE:	Not applicable
VAPOR DENSITY (air= 1.0):	Not applicable
EVAPORATION RATE:	Negligible
% VOLATILES:	Negligible
FLASH POINT:	Not flammable

COMPARED TO: Not Applicable

(Flash point method and additional flammability data are found in Section 5.)

SECTION 10: STABILITY AND REACTIVITY

NORMALLY STABLE/(CONDITIONS TO AVOID):
Stable. Can absorb some moisture from the air. Hygroscopic.

INCOMPATIBILITIES:
Strong acids. (Contact may generate highly corrosive and toxic hydrofluoric acid.)
Alkalies.

HAZARDOUS DECOMPOSITION PRODUCTS:
See above. Otherwise, none.

HAZARDOUS POLYMERIZATION:
Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

IMMEDIATE (ACUTE) EFFECTS:
No data found however LD₅₀ (oral) is believed to be less than 500 mg/kg.

DELAYED (SUBCHRONIC AND CHRONIC EFFECTS)
None present.

OTHER DATA:
None.

SECTION 12: ECOLOGICAL INFORMATION

No Data Available.

SECTION 13: DISPOSAL CONSIDERATIONS

RCRA
Is the unused product a RCRA hazardous Waste if discarded? No If yes, the RCRA ID number is: D002(corrosive)

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OTHER DISPOSAL CONSIDERATIONS:

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

SECTION 14: TRANSPORT INFORMATION

US DOT HAZARD CLASS: 8 (Corrosive); Subsidiary risk classification is 6.1 (toxic)
US DOT ID NUMBER: UN 1811
PROPER SHIPPING NAME: Potassium hydrogen difluoride, solid

For additional information on shipping regulations affecting this material, contact the information number found in Section 1.

SECTION 15: REGULATORY INFORMATION

TOXIC SUBSTANCES CONTROL ACT (TSCA)

TSCA INVENTORY STATUS: All ingredients listed on the TSCA Inventory
OTHER TSCA ISSUES: None

SARA TITLE III/ CERCLA

"Reportable/ Quantities" (RQs) and/or "Threshold Planning Quantities" (TPQs) exist for the following ingredients.

<u>INGREDIENT NAME</u>	<u>SARA/CERCLA RQ (LB)</u>	<u>SARA EHS TPQ(LB)</u>
None listed.		

Spills or releases resulting in the loss of any ingredient at or above its RQ requires immediate notification to the National Response Center (800) 424-8803 and to your Local Emergency Planning Committee.

SECTION 311 HAZARD CLASS: Immediate, delayed

SARA 313 TOXIC CHEMICALS:

The following ingredients are SARA 313 "Toxic Chemicals" and may be subject to annual reporting requirements. CAS numbers and weight percents are found in Section 2.

<u>INGREDIENT NAME</u>	<u>COMMENT</u>
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STATE RIGHT-TO-KNOW

In addition to the ingredients found in Section 2, the following are listed for state right-to-know purposes.

<u>INGREDIENT NAME</u>	<u>WEIGHT%</u>	<u>COMMENT</u>
No ingredients listed in this section.		

ADDITIONAL REGULATORY INFORMATION:

None listed.

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WHMIS CLASSIFICATION (CANADA):
E, D1B, D2B

FOREIGN CHEMICAL CONTROL INVENTORY STATUS
Listed on Canadian DSL and EU EINECS.

SECTION 16: OTHER INFORMATION

CURRENT ISSUE DATE: OCTOBER 11, 2005
PREVIOUS ISSUE DATE: JANUARY 1, 2005

CHANGES TO MSDS FROM PREVIOUS ISSUE DATE ARE DUE TO THE FOLLOWING:
New Format

OTHER INFORMATION:

All information, statements, data, advice and/or recommendations, including, without limitation, those relating to storage, loading/unloading, piping and transportation (collectively referred to herein as "information") are believed to be accurate and reliable. However, no representation or warranty, express or implied, is made as to its completeness, accuracy, fitness or a particular purpose or any other matter, including, including, without limitation, that the practice of application of any such information is free of patent infringement or other intellectual property misappropriation. ShoreChem, LLC is not engaged in the business of providing technical, operational, engineering or safety information for a fee, and therefore, any such information provided herein has been furnished as an accommodation and without charge. All information provided herein is intended for use by persons having requisite knowledge, skill and experience in the chemical industry. ShoreChem, LLC shall not be responsible or liable for the use, application or implementation of the information, provided herein, and all such information is to be used at the risk, and in the sole judgment and discretion, of such persons, their employees, advisors, and agents.

Date Created	Created By	Replaces	Area	Product/ Process	Special
7/27/05	JD	01/01/05	MSDS	Meta Chip	SRE