

MATERIAL SAFETY DATA SHEET

Potassium Fluoroborate



SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Potassium Fluoroborate

OTHER/GENERIC NAMES: Potassium Tetrafluoroborate

PRODUCT USES: Industrial

MANUFACTURER: Laboratorios Hersol S.A. de C.V. Niños Héroes #116,
Barrio. La Concepción, San Mateo Atenco
Estado de México, México. C.P.: 52100

TELEPHONE: +52 728 28 71980

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENT NAME:</u>	<u>CAS NO.</u>	<u>% WT</u>
Potassium Tetrafluoroborate	14075-53-7	90-100

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

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: A colorless, odorless solid that may irritate the skin and respiratory tract. Causes eye irritation. May cause allergic skin reaction. May be harmful if swallowed. Contact with acids liberates toxic hydrogen fluoride gas. In the event of fire, material can release toxic hydrogen fluoride gas.

EFFECTS

Main effects: Possible irritation of the mucous membranes and eyes.

Eyes Contact: Contact with eyes may cause irritation

Skin Contact: May cause irritation.

Inhalation: May cause irritation of respiratory tract. May be harmful if inhaled.

Ingestion: Ingestion may cause irritation to mucous membranes. May be harmful if swallowed.

Other: Contact with acids liberates toxic gas.

MATERIAL SAFETY DATA SHEET

Potassium Fluoroborate



SECTION 4: FIRST AID MEASURES

FIRST AID

General Advice:	Consult a Physician
Inhalation:	Move to fresh air. If symptoms persist, call a physician.
Eyes Contact:	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Ingestion:	Call a physician or Poison Control immediately. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.
Skin Contact:	Rinse immediately with plenty of water and seek medical advice.
Notes to physician:	Treat symptomatically.
Protection of first-aiders:	Avoid contact with skin and eyes.

SECTION 5: FIRE-FIGHTING MEASURES

Suitable extinguishing media:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Extinguishing media which must not be used for safety reasons:	No information available
Special protective equipment for firefighters:	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Special hazards:	In the event of fire, the following can be released, hydrogen fluoride, potassium oxides, boron oxides.
Specific methods:	In the event of fire, cool tanks with water spray.
Flash point:	Not determined.
Flash point test method:	Not applicable.
Autoignition temperature:	Not applicable.
Flammability Limits in Air:	
-Lower :	Not applicable.
-Upper:	Not applicable.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions:	Isolate area and deny entry to unauthorized and/or unprotected personnel. See Section 8 for complete Personal Protective Equipment (PPE) recommendations.
Environmental precautions:	Do not release into the environment or public sewage without consulting local authorities and obtaining all applicable permits and notification requirements.
Methods of containment:	Prevent further leakage or spillage if safe to do so.

MATERIAL SAFETY DATA SHEET

Potassium Fluoroborate



Methods for cleaning up: Spills should be cleaned up immediately to prevent dispersions of airborne mists and dusts. For a spill involving a solid material, clean up promptly by scoop or vacuum. Avoid dust formation. Use approved industrial vacuum cleaner for removal. Keep in suitable, closed containers for disposal. Dike spilled liquid material with suitable inert absorbent (ex.sand, soil, vermiculite) and place in a clean dry container for later recycle or disposal. Flush with water. Clean contaminated surface thoroughly. Dispose of in accordance with all local, state, provincial, and federal regulations.

SECTION 7: HANDLING AND STORAGE

NORMAL HANDLING

Technical measures/precautions: Use only in area provided with appropriate exhaust ventilation.
Safe handling advice: Avoid contact with skin, eyes, and clothing. Avoid breathing vapors or mists. Do not ingest.

STORAGE

Technical measures/storage conditions: Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture.
Incompatible products: Strong acids.
Shelf Life (Days): Not determined.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering measures to reduce exposure:
Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Respiratory protection: Use NIOSH approved respiratory equipment when airborne concentrations are equal to or may exceed exposure limits. For emergency or other conditions where exposure levels are not known or may be uncontrolled, use a positive pressure air-supplied or self-contained breathing apparatus (SCBA).

Hand protection: Consult glove manufacturer to determine the most suitable chemical resistant glove for user's application. Consideration must be given to durability and permeation resistance.

Skin and body protection: Chemical resistance apron. Long sleeved clothing. Boots.

Eye protection: Tightly fitting safety goggles. Face-shield. An emergency eye wash must be readily accessible to the work area.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

MATERIAL SAFETY DATA SHEET

Potassium Fluoroborate



EXPOSURE GUIDELINES:

<u>INGREDIENT NAME</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER LIMIT</u>
Potassium Tetrafluoroborate			2.5 mg/m ³ TWA

¹= Limit established by Industry Standard.

²= Workplace Environmental Exposure Level (AIHA).

³= Biological Exposure Index (ACGIH).

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	White Powder
CHEMICAL FORMULA:	KBF ₄
ODOR:	Odorless
SPECIFIC GRAVITY (H₂O = 1):	No information available.
SOLUBILITY IN WATER (weight %):	4.4 g/l, temperature 20 Celsius
pH:	5-8
BOILING POINT:	Not applicable
MELTING POINT:	530 Celsius (Decomposition)
FLASH POINT:	Not applicable
BULK DENSITY:	1.100 kg/m ³
DECOMPOSITION TEMPERATURE:	>= 530 °C
GRANULOMETRY:	90 % < 150 um

SECTION 10: STABILITY AND REACTIVITY

STABILITY:

Stable under certain conditions (see below)

CONDITIONS TO AVOID:

Heat/Sources of heat.

MATERIALS TO AVOID:

Strong acids and Strong bases.

HAZARDOUS DECOMPOSITION PRODUCTS:

Hydrogen fluoride and Boron Trifluoride.

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

LC50/Inhalation/4h/ rat= No information available.

LD50/dermal/rabbit= No information available.

LD50/oral/rat= No information available.

MATERIAL SAFETY DATA SHEET

Potassium Fluoroborate



CHRONIC TOXICITY:

No specific data. No mutagenic effect. Contrarily to fluoride the tetrafluoroborate ion is not accumulable.

COMMENTS:

Irritant effects linked to acid properties of the product.

SECTION 12: ECOLOGICAL INFORMATION

Environmental Hazards

Ecotoxicity effects:	Ecological injuries are not known or expected under normal use.
Aquatic toxicity:	No information available.
Mobility:	This product is soluble in water.
Bioaccumulative potential:	There is no indication of biomagnification along the terrestrial food chain (soil-plant animal). No information available.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste from residues/unused products:	Dispose of in accordance with federal, provincial state, and local regulations.
Contaminated packaging:	Empty containers should be taken for local recycling, recovery or waste disposal.

SECTION 14: TRANSPORT INFORMATION

NOT REGULATED.

SECTION 15: REGULATORY INFORMATION

INTERNATIONAL INVENTORIES:

All of the components in this product are on or exempt from the following inventories:

U.S.A. (TSCA), Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Australia (AICS), Korea (ECL), China (IECSC), Japan (ENCS), Philippines (PICCS).

International Inventory Legend

TSCA: Toxic Substance Control Act

DSL: Domestic Substance List

NDSL: Non-Domestic Substance List

EINECS: European Inventory of Existing Commercial Chemical Substances.

ELINCS: EU List of Notified Chemical Substances

ECL: Existing Chemicals List aka Existing and Evaluated Chemical Substances

AICS: Inventory of Chemical Substances.

ENCS: Existing and New Chemical Substances

PICCS: Philippines Inventory of Chemicals and Chemical Substances.

US Regulations:

US Regulations Legend:

MATERIAL SAFETY DATA SHEET

Potassium Fluoroborate



CA PROP 65: California Proposition 65- Carcinogens List
TSCA 12 (b): TSCA Section 12 (b) – Export Notification
SARA 302: CERCLA/SARA – Section 302 Extremely Hazardous Substances EPCRA RQ's and TPQ's
SARA 313: CERCLA/SARA – Section 313 – Emission Reporting
CERCLA RQ: CERCLA/SARA – Hazardous Substances and Their Reportable Quantities.
CWC: Chemical Weapons Convention – Annex on Chemicals
DEA LISTED: DEA (Drug Enforcement Administration) – DEA Controlled, Precursors, and/or Essential Chemicals.

SARA 311	
Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive hazard	No

Canada

This product has been classified in accordance with the criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Controlled List HAZARDOUS COMPONENTS

Components	CAS-No	WHMIS Call out Threshold
Borate (1-) tetrafluoro-, potassium	14075-53-7	1 %

WHMIS hazard class:

- D2B Toxic Materials.

SECTION 16: OTHER INFORMATION

NFPA: Health: 1 Flammability: 0 Instability: 0

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. AWSM Industries, 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. AWSM Industries, 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
02/12/08	JLHG	01/01/08	MSDS	KBF4	SRE
10/3/2011	JLHG	02/12/2008	MSDS	KBF4	SRE