Harrell Industries, Inc.

SAFETY DATA SHEET

Issue Date 29-Apr-2015 **Revision Date** 30-Sep-2015 **Version** 3

1. IDENTIFICATION

Product identifier

Product Name Potassium Fluoride, Dihydrate

Other means of identification

Product Code 6710
UN/ID no. UN1812
Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Laboratory chemicals.
Uses advised against No information available

Details of the supplier of the safety data sheet

Manufacturer Address
Harrell Industries, Inc.
2495 Commerce Drive
Rock Hill, SC 29730

www.harrellindustries.com

Emergency telephone number

Company Phone Number 803-327-6335
Fax Number 803-327-7808
24 Hour Emergency Phone Number 800 633-8253 (PERS)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 3
Acute toxicity - Dermal	Category 3
Acute toxicity - Inhalation (Gases)	Category 3
Serious eye damage/eye irritation	Category 1

Label elements

Emergency Overview

Danger

Hazard statements
Toxic if swallowed
Toxic in contact with skin
Toxic if inhaled
Causes serious eye damage

DANGER! MAY BE FATAL IF SWALLOWED OR INHALED. CORROSIVE. AFFECTS RESPIRATORY SYSTEM, HEART, SKELETON, CIRCULATORY SYSTEM, CENTRAL NERVOUS SYSTEM AND KIDNEYS. CAUSES IRRITATION AND BURNS TO SKIN, EYES AND RESPIRATORY TRACT. IRRITATION AND BURN EFFECTS MAY BE DELAYED. HARMFUL IF ABSORBED THROUGH SKIN.

Appearance White Powder **Physical state** powder **Odor** Odorless

Precautionary Statements - Prevention
Avoid breathing dust/fume/gas/mist/vapors/spray
Wash skin thoroughly after handling
Do not eat, drink or smoke when using this product
Use only outdoors or in a well-ventilated area
Wear protective gloves/protective clothing/eye protection/face protection

Causes irritation, redness, and pain. Contact may cause permanent eye damage.
Causes severe irritation and possibly burns to the skin. May be absorbed through the skin. Effects may not appear immediately.
May cause irritation and burns to the respiratory tract, symptoms may include coughing, sore throat, and labored breathing. May be absorbed through inhalation of dust; symptoms may parallel those from ingestion exposure. Irritation and burning effects may not appear immediately.
May cause salivation, nausea, vomiting, diarrhea, and abdominal pain, followed by weakness, tremors, shallow respiration, cardopedal spasm, convulsions, and coma. May cause brain and kidney damage. Death may be caused by respiratory paralysis.
Affects heart and circulatory system

Hazards not otherwise classified (HNOC)
Not applicable

Other Information
Not applicable

Unknown acute toxicity 100% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance
Synonyms None.
Formula KF

Chemical Name	CAS No.	Weight-%
Potassium fluoride	7789-23-3	99-100

4. FIRST AID MEASURES

Description of first aid measures

Eye contact Immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Call a physician immediately.

Skin contact Wipe off excess material from skin. Immediately flush skin with large amounts of soapy water. Remove contaminated clothing and shoes. Wash clothing before re-use. Apply bandages soaked in magnesium sulfate. Call a physician immediately.

Inhalation Remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Call a physician immediately.

Ingestion Administer milk, chewable calcium carbonate tablets or milk of magnesia. Never give anything by mouth to an unconscious person. Call a physician immediately.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians For large exposures, systemic effects (hypocalcaemia and hypomagnesia) may occur.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water pray may be used to keep fire exposed containers cool and will also reduce fumes and irritant gases.

Unsuitable extinguishing media Caution: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical
No information available.

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation, especially in confined areas.

Environmental precautions

Environmental precautions See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers. Avoid creating dust.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Containers of this material may be hazardous when empty since they retain residues (dust, solids); observe all warnings and precautions listed for the product.

Incompatible materials Platinum plus bromine trifluoride; reacts with strong acids to form hydrogen fluoride.

Corrodes glass and porcelain.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines .

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Potassium fluoride 7789-23-3	TWA: 2.5 mg/m³ F	TWA: 2.5 mg/m³ F TWA: 2.5 mg/m³ dust (vacated) TWA: 2.5 mg/m³	-

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Use chemical safety goggles and/or full face shield. Maintain eye wash fountain and quick-drench facilities in work area.

Skin and body protection Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state powder
Appearance White Powder
Color white
Odor Odorless
Odor threshold No information available

Property	Values	Remarks • Method
pH	No information available	
Melting point / freezing point	860 °C / 1580 °F	
Boiling point / boiling range	1505 °C / 2741 °F	
Flash point	No information available	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	1@885C(1625F)	
Vapor density	2.0	
Relative density	2.48	
Water solubility	Appreciable in water.	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	94.13
VOC Content (%)	No information available
Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity
No data available

Chemical stability
Stable under ordinary conditions of use and storage. Absorbs moisture from air.

Possibility of Hazardous Reactions
None under normal processing.

Hazardous polymerization Will not occur.

Conditions to avoid
moisture. Incompatible materials.

Incompatible materials
Platinum plus bromine trifluoride; reacts with strong acids to form hydrogen fluoride. Corrodes glass and porcelain.

Hazardous Decomposition Products
Hydrogen fluoride.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Potassium fluoride 7789-23-3	= 245 mg/kg (Rat)	-	-

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP

Numerical measures of toxicity - Product Information

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Potassium fluoride 7789-23-3	-	9.3: 96 h Ctenopharyngodon idella mg/L LC50	-

Persistence and degradability

Bioaccumulation

Other adverse effects No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations. Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility.

Contaminated packaging Do not reuse container.

Chemical Name	California Hazardous Waste Status
Potassium fluoride 7789-23-3	Toxic

14. TRANSPORT INFORMATION

DOT Regulated
- **UN/ID no.** UN1812
- **Proper shipping name** Potassium fluoride, soild
- **Hazard Class** 6.1
- **Packing Group** III

- **UN/ID no.** UN1812
- **Proper shipping name** Potassium fluoride, soild
- **Hazard Class** 6.1
- **Packing Group** III

MEX Regulated
- **UN/ID no.** UN1812
- **Proper shipping name** Potassium fluoride, soild
- **Hazard Class** 6.1
- **Packing Group** III

ICAO (air) Regulated
- **UN/ID no.** UN1812
- **Proper shipping name** Potassium fluoride, soild
- **Hazard Class** 6.1
- **Packing Group** III

IATA Regulated
- **UN/ID no.** UN1812
- **Proper shipping name** Potassium fluoride, soild
- **Hazard Class** 6.1
- **Packing Group** III

IMDG Regulated
- **UN/ID no.** UN1812
- **Proper shipping name** Potassium fluoride, soild
- **Hazard Class** 6.1
- **Packing Group** III

RID Regulated
- **UN/ID no.** UN1812
- **Proper shipping name** Potassium fluoride, soild
- **Hazard Class** 6.1
- **Packing Group** III

ADR Regulated
- **UN/ID no.** UN1812
- **Proper shipping name** Potassium fluoride, soild
- **Hazard Class** 6.1
- **Packing Group** III

ADN Regulated

UN Number	UN1812
Proper shipping name	Potassium fluoride, soild
Hazard Class	6.1
Packing Group	III

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

This product may contain substances regulated by state right-to-know regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Potassium fluoride 7789-23-3	X	-	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	**Health hazards** 2	**Flammability** 0	**Instability** 0	**Physical and Chemical Properties** -
HMIS	**Health hazards** 2	**Flammability** 0	**Physical hazards** 0	**Personal protection** X

Issue Date 29-Apr-2015
Revision Date 30-Sep-2015
Revision Note
No information available

Disclaimer

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. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet