

SAFETY DATA SHEET

Preparation Date: 4/6/2016

Revision Date: 7/27/2016

Revision Number: G2

1. IDENTIFICATION

Product identifier

Product code: P-335
Product Name: POTASSIUM FLUORIDE, 40 PERCENT (W/V) AQUEOUS SOLUTION

Other means of identification

Synonyms: No information available
CAS #: Mixture
RTECS # Not available
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: No information available.
Uses advised against No information available

Supplier: Spectrum Chemical Mfg. Corp
 14422 South San Pedro St.
 Gardena, CA 90248
 (310) 516-8000.

Order Online At: <https://www.spectrumchemical.com>

Emergency telephone number Chemtrec 1-800-424-9300

Contact Person: Martin LaBenz (West Coast)

Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A

Label elements

Warning

Hazard statements

Harmful if swallowed
 Causes skin irritation
 Causes serious eye irritation

**Hazards not otherwise classified (HNOC)**

Not Applicable

Other hazards

Not available

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Wear protective gloves
Wear eye/face protection

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
IF ON SKIN: Wash with plenty of water
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash it before reuse
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %
Water	7732-18-5	60
Potassium Fluoride, Dihydrate	13455-21-5	40

4. FIRST AID MEASURES**First aid measures****General Advice:**

National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222.

Skin Contact:

Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention. If skin irritation persists, call a physician.

Eye Contact:

Flush eyes with water for 15 minutes. Get medical attention.

Inhalation:

Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion:

Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Obtain medical attention.

Most important symptoms and effects, both acute and delayed**Product code:** P-335**Product name:** POTASSIUM
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Symptoms May cause digestive (gastrointestinal) tract irritation. May cause abdominal pain, nausea, vomiting, diarrhea. May cause salivation. Central nervous system depression. Central nervous system effects. May affect the cardiovascular system. Ingestion of very large amounts may cause Fluorosis. It may affect the kidneys. May cause eye/skin/respiratory tract irritation.

Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically.

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: The product is not flammable.

Unsuitable Extinguishing Media: No information available.

Specific hazards arising from the chemical

Hazardous Combustion Products: No information available.

Specific hazards: No information available.

Special Protective Actions for Firefighters

Specific Methods: 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

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Absorb spill with inert material (e.g. vermiculite, dry sand or earth). In case of large spill, dike if needed. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Keep away from incompatible materials.

Safe Handling Advice

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not ingest. Do not breathe vapors or spray mist. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

Incompatible Materials:

Strong acids.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Components	CAS-No.	OSHA	NIOSH	ACGIH	AIHA WHEEL
Water	7732-18-5	None	None	None	None
Potassium Fluoride, Dihydrate	13455-21-5	2.5 mg/m ³ TWA (as F)	None	2.5 mg/m ³ TWA (as F)	None

Canada

Components	CAS-No.	Alberta	British Columbia	Ontario	Quebec
Water	7732-18-5	None	None	None	None
Potassium Fluoride, Dihydrate	13455-21-5	2.5 mg/m ³ TWA (as F)	2.5 mg/m ³ TWA (as F)	2.5 mg/m ³ TWA (as F)	2.5 mg/m ³ TWAEV (as F)

Australia and Mexico

Components	CAS-No.	Australia	Mexico
Water	7732-18-5	None	None
Potassium Fluoride, Dihydrate	13455-21-5	2.5 mg/m ³ TWA (as F)	2.5 mg/m ³ TWA (as F)

Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

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Eye protection:	Goggles
Skin and body protection:	Chemical resistant apron. Gloves. Long sleeved clothing.
Respiratory protection:	Respiratory protection is not necessary for normal handling. Good room ventilation or use of local exhaust (fume hood) is sufficient. Use a vapor respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentrations of mist or vapor, inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent.
Hygiene measures:	Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid	Appearance: Clear.	Color: Colorless.
Odor: No information available.	Taste No information available.	Formula: No information available
Molecular/Formula weight: No information available	Flammability: No information available	Flashpoint (°C/°F): No information available.
Flash Point Tested according to: Not available	Autoignition Temperature (°C/°F): No information available	Lower Explosion Limit (%): No information available
Upper Explosion Limit (%): No information available	Melting point/range(°C/°F): No information available	Decomposition temperature(°C/°F): No information available
Boiling point/range(°C/°F): No information available	Bulk density: No information available	Density (g/cm3): No information available
Specific gravity: 1.2-1.3	pH: No information available	Vapor pressure @ 20°C (kPa): No information available
Evaporation rate: No information available	Vapor density: No information available	VOC content (g/L): No information available
Odor threshold (ppm): No information available	Partition coefficient (n-octanol/water): No information available	Viscosity: No information available
Miscibility: No information available	Solubility: Soluble in Water	

10. STABILITY AND REACTIVITY

Reactivity

Reactive with strong acids
 Reacts with strong acids to form hydrogen fluoride.

Chemical stability

Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

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Conditions to avoid: Heat. Incompatible materials.

Incompatible Materials: Strong acids.

Hazardous decomposition products: No information available.

Other Information

Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:

Skin. Ingestion.

Acute Toxicity

Component Information

Water - 7732-18-5

LD50/oral/rat = > 90 mL/kg Oral LD50 Rat
LD50/oral/mouse = No information available
LD50/dermal/rabbit = No information available
LD50/dermal/rat = No information available
LC50/inhalation/rat = No information available
LC50/inhalation/mouse = No information available
Other LD50 or LC50 information = No information available

Potassium Fluoride, Dihydrate - 13455-21-5

LD50/oral/rat = 245 mg/kg Oral LD50 Rat (for CAS number 7789-23-3 Potassium Fluoride, anhydrous)
LD50/oral/mouse = No information available
LD50/dermal/rabbit = No information available
LD50/dermal/rat = No information available
LC50/inhalation/rat = No information available
LC50/inhalation/mouse = No information available
Other LD50 or LC50 information = No information available

Product Information

LD50/oral/rat =
VALUE- Acute Tox Oral = No information available

LD50/oral/mouse =
Value - Acute Tox Oral = No information available

LD50/dermal/rabbit
VALUE-Acute Tox Dermal = No information available

LD50/dermal/rat
VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat
VALUE-Vapor = No information available

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VALUE-Gas = No information available
 VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse

VALUE-Vapor = No information available
 VALUE - Gas = No information available
 VALUE - Dust/Mist = No information available

Symptoms

Skin Contact: Causes skin irritation.
Eye Contact: Causes serious eye irritation.
Inhalation May cause respiratory tract irritation.
Ingestion Harmful if swallowed. May cause digestive (gastrointestinal) tract irritation. May cause abdominal pain, nausea, vomiting, diarrhea. May cause salivation. It may cause central nervous system depression. May affect the cardiovascular system. May affect the kidneys. May affect respiration.
Aspiration hazard No information available.

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

Chronic Toxicity Chronic inhalation and ingestion may cause fluorosis with skeletal abnormalities. Fluorosis is characterized by nausea, vomiting, loss of appetite, diarrhea, constipation, anemia, weakness, brittle bones, stiffness of joints. Can also result in osteosclerosis (an increase of bone density in characteristic patterns. Can also cause discoloration of teeth, and may cause kidney damage.

Sensitization: No information available.

Mutagenic Effects: For Potassium Fluoride, dihydrate:
 Mutations in microorganisms
 Mutagenic effects in mammalian somatic cells

Carcinogenic effects: Not considered carcinogenic.

Components	CAS-No.	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Water	7732-18-5	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed
Potassium Fluoride, Dihydrate	13455-21-5	Not listed	Group A4 - Not classifiable as a human carcinogen (listed under fluorides)	Not listed	Not listed	Not listed	Not listed

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Reproductive toxicity No data is available

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Reproductive Effects: No information available
Developmental Effects: No information available
Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure No information available.
STOT - repeated exposure No information available.
Target Organs: No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: No data available.
Persistence and degradability: No information available
Bioaccumulative potential: No information available.
Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:
Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:
Empty containers should be taken for local recycling, recovery or waste disposal

Components	CAS-No.	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Water	7732-18-5	None	None	None	None
Potassium Fluoride, Dihydrate	13455-21-5	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No: UN3422
Proper Shipping Name: Potassium fluoride solution
Hazard Class: 6.1
Subsidiary Risk: No information available
Packing Group: III
ERG No: 154
Marine Pollutant No data available
DOT RQ (lbs): No information available
Special Provisions No Information available
Symbol(s):

TDG (Canada)

UN-No: UN3422

Product code: P-335

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Proper Shipping Name: Potassium fluoride solution
Hazard Class: 6.1
Subsidiary Risk: No information available
Packing Group: III
Marine Pollutant: No Information available

ADR

UN-No: UN3422
Proper Shipping Name: Potassium fluoride solution
Hazard Class: 6.1
Packing Group: III
Subsidiary Risk: No information available

IMO / IMDG

UN-No: UN3422
Proper Shipping Name: Potassium fluoride solution
Hazard Class: 6.1
Subsidiary Risk: No information available
Packing Group: III
Marine Pollutant: No information available
EMS: F-A

RID

UN-No: UN3422
Proper Shipping Name: Potassium fluoride solution
Hazard Class: 6.1
Subsidiary Risk: No information available
Packing Group: III

ICAO

UN-No: UN3422
Proper Shipping Name: Potassium fluoride solution
Hazard Class: 6.1
Subsidiary Risk: No information available
Packing Group: III

IATA

UN-No: UN3422
Proper Shipping Name: Potassium fluoride solution
Hazard Class: 6.1
Subsidiary Risk: No information available
Packing Group: III
ERG Code: 6L
Special Provisions: No information available

15. REGULATORY INFORMATION

International Inventories

Components	CAS-No.	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
<i>Water</i>	7732-18-5	Present	Present KE-35400	Present	Not present	Present	Present	Present 231-791-2
<i>Potassium Fluoride, Dihydrate</i>	13455-21-5	Not Listed	Not present	Not present	Not present	Not present	Present	Not present

U.S. Regulations

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	CAS-No.	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Water	7732-18-5	Not Listed	Not Listed	Not Listed	Not Listed
Potassium Fluoride, Dihydrate	13455-21-5	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Components	CAS-No.	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
Water	7732-18-5	None	None	None	None	None
Potassium Fluoride, Dihydrate	13455-21-5	None	None	None	None	None

U.S. TSCA

Components	CAS-No.	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Water	7732-18-5	Not Applicable	Not Applicable
Potassium Fluoride, Dihydrate	13455-21-5	Not Applicable	Not Applicable

Canada

WHMIS hazard class:

Non-controlled

Components

Water

WHIMHAZ

Uncontrolled product according to WHMIS classification criteria

Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Inventory

Components	CAS-No.	Canada (DSL)	Canada (NDSL)
Water	7732-18-5	Present	Not Listed
Potassium Fluoride, Dihydrate	13455-21-5	Not Listed	Not Listed

Components	CAS-No.	CEPA Schedule I - Toxic Substances
Water	7732-18-5	Not listed
Potassium Fluoride, Dihydrate	13455-21-5	Not listed
Components	CAS-No.	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Water	7732-18-5	Not listed
Potassium Fluoride, Dihydrate	13455-21-5	Not listed

EU Classification

R-phrase(s)

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R22 - Harmful if swallowed.
R36/38 - Irritating to eyes and skin.

S -phrase(s)

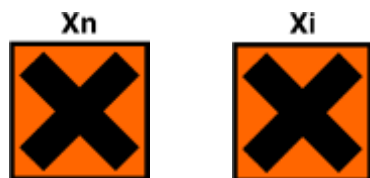
S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S37 - Wear suitable gloves.
S46 - If swallowed, seek medical advice immediately and show this container or label.

Components	CAS-No.	Classification	Concentration Limits:	Safety Phrases
Water	7732-18-5		No information	
Potassium Fluoride, Dihydrate	13455-21-5		No information	

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

Xn - Harmful.
Xi - Irritant.



16. OTHER INFORMATION

Preparation Date: 4/6/2016
Revision Date: 7/27/2016
Prepared by: Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet