

Safety Data Sheet

according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations


Revision: August 22, 2020

1 Identification

- **Product identifier**
- **Trade name:** Potassium Fluoride, 40% w/v
- **Product code:** PF3240SS
- **Recommended use and restriction on use**
- **Recommended use:** Laboratory chemicals
- **Restrictions on use:** No relevant information available.
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
AquaPhoenix Scientific, Inc.
860 Gitts Run Road
Hanover, PA 17331 USA
Tel +1 (717)632-1291
Toll-Free: (866)632-1291
info@aquaphoenixsci.com
- **Distributor:**
AquaPhoenix Scientific
860 Gitts Run Road,
Hanover, PA 17331
(717) 632-1291
- **Emergency telephone number:**
ChemTel Inc.
(800)255-3924 (North America)
+1 (813)248-0585 (International)

2 Hazard(s) identification

- **Classification of the substance or mixture**
Acute Tox. 3 H301 Toxic if swallowed.
Acute Tox. 3 H311 Toxic in contact with skin.
Acute Tox. 3 H331 Toxic if inhaled.

- **Label elements**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms:**

GHS06
- **Signal word:**
None.
Danger
- **Hazard statements:**
H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.
- **Precautionary statements:**
Not regulated.
P261 Avoid breathing mist, vapors, or spray.

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- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P271 Use only outdoors or in a well-ventilated area.
- P280 Wear protective gloves/protective clothing/eye protection.
- P301+P310 If swallowed: Immediately call a poison center/doctor.
- P330 Rinse mouth.
- P302+P352 If on skin: Wash with plenty of water.
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P311 Call a poison center/doctor.
- P361+P364 Take off immediately all contaminated clothing and wash it before reuse.
- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Other hazards** There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Components:**

7789-23-3	potassium fluoride	40%
	 Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331	
7732-18-5	Water	60%

· **Additional information:**

For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret.
For the wording of the listed Hazard Statements, refer to section 16.

4 First-aid measures

· **Description of first aid measures**

· **General information:** Take affected persons out into the fresh air.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:**

Immediately rinse with water.

If skin irritation continues, consult a doctor.

· **After eye contact:**

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:**

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; immediately call for medical help.

· **Most important symptoms and effects, both acute and delayed:**

Coughing

Breathing difficulty

Gastric or intestinal disorders when ingested.

· **Danger:**

Danger of disturbed cardiac rhythm.

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May cause neurotoxic effects.

Toxic if swallowed, in contact with skin or if inhaled.

· **Indication of any immediate medical attention and special treatment needed:**

If medical advice is needed, have product container or label at hand.

5 Fire-fighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.

· **For safety reasons unsuitable extinguishing agents:** No relevant information available.

· **Special hazards arising from the substance or mixture**

During heating or in case of fire poisonous gases are produced.

· **Advice for firefighters**

· **Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation.

Wear protective equipment. Keep unprotected persons away.

For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.

· **Environmental precautions**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· **Methods and material for containment and cleaning up**

Use limestone to neutralize and/or absorb spill.

Send for recovery or disposal in suitable receptacles.

· **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

· **Handling**

· **Precautions for safe handling:**

Use only in well ventilated areas.

Avoid splashes or spray in enclosed areas.

Prevent formation of aerosols.

· **Information about protection against explosions and fires:** No special measures required.

· **Conditions for safe storage, including any incompatibilities**

· **Requirements to be met by storerooms and receptacles:** No special requirements.

· **Information about storage in one common storage facility:**

Store away from foodstuffs.

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Do not store together with acids.

· **Further information about storage conditions:**

Keep containers tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

· **Specific end use(s)** No relevant information available.

8 Exposure controls/personal protection

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

7789-23-3 potassium fluoride

PEL (USA)	Long-term value: 2.5 mg/m ³ as F
REL (USA)	Long-term value: 2.5 mg/m ³ as F
TLV (USA)	Long-term value: 2.5 mg/m ³ as F, BEI
EL (Canada)	Long-term value: 2.5 mg/m ³ as F
LMPE (Mexico)	Long-term value: 2.5 mg/m ³ A4, IBE; como F

· **Ingredients with biological limit values:**

7789-23-3 potassium fluoride

BEI (USA)	2 mg/L Medium: urine Time: prior to shift Parameter: Fluoride (background, nonspecific)
	3 mg/L Medium: urine Time: end of shift Parameter: Fluoride (background, nonspecific)

· **Exposure controls**

· **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

· **Engineering controls:** Provide adequate ventilation.

· **Breathing equipment:** Use suitable respiratory protective device when high concentrations are present.

· **Protection of hands:**

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Protective gloves

- **Material of gloves**
Neoprene gloves
Nitrile rubber, NBR
Fluorocarbon rubber (Viton)

- **Eye protection:**



Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

- **Body protection:** Protective work clothing
- **Limitation and supervision of exposure into the environment** No special requirements.
- **Risk management measures** No special requirements.

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **Appearance:**

- | | |
|--------------------------|-----------------|
| · Form: | Liquid |
| · Color: | Colorless |
| · Odor: | Characteristic |
| · Odor threshold: | Not determined. |

- | | |
|---------------------------------------|-------------------|
| · pH-value: | Not determined. |
| · Melting point/Melting range: | Not determined. |
| · Boiling point/Boiling range: | >100 °C (>212 °F) |

- | | |
|-----------------------|-------------------------------|
| · Flash point: | The product is not flammable. |
|-----------------------|-------------------------------|

- | | |
|---|-----------------|
| · Flammability (solid, gaseous): | Not applicable. |
|---|-----------------|

- | | |
|-------------------------------------|-----------------|
| · Auto-ignition temperature: | Not determined. |
|-------------------------------------|-----------------|

- | | |
|-------------------------------------|-----------------|
| · Decomposition temperature: | Not determined. |
|-------------------------------------|-----------------|

- | | |
|-------------------------------|---|
| · Danger of explosion: | Product does not present an explosion hazard. |
|-------------------------------|---|

- **Explosion limits**

- | | |
|-----------------|-----------------|
| · Lower: | Not determined. |
| · Upper: | Not determined. |

- | | |
|--------------------------------|----------------|
| · Oxidizing properties: | Non-oxidizing. |
|--------------------------------|----------------|

- | | |
|--------------------------|-----------------|
| · Vapor pressure: | Not determined. |
|--------------------------|-----------------|

- | | |
|------------------------------------|---------------------------------------|
| · Density at 20 °C (68 °F): | 1.6 g/cm ³ (13.35 lbs/gal) |
| · Relative density: | Not determined. |
| · Vapor density: | Not determined. |
| · Evaporation rate: | Not determined. |

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- | | |
|---|------------------------------------|
| · Solubility in / Miscibility with Water: | Soluble. |
| · Partition coefficient (n-octanol/water): | Not determined. |
| · Viscosity | |
| Dynamic: | Not determined. |
| Kinematic: | Not determined. |
| · Other information | No relevant information available. |

10 Stability and reactivity

- **Reactivity:** No relevant information available.
- **Chemical stability:** Stable under normal temperatures and pressures.
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions**
Contact with acids releases toxic gases.
Toxic fumes may be released if heated above the decomposition point.
- **Conditions to avoid** No relevant information available.
- **Incompatible materials** No relevant information available.
- **Hazardous decomposition products**
Under fire conditions only:
Danger of toxic fluorine based pyrolysis products.
Hydrogen fluoride

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
Harmful if swallowed.
Harmful in contact with skin.
Harmful if inhaled.
- **LD/LC50 values that are relevant for classification:**

ATE (Acute Toxicity Estimate)

Oral	LD50	245 mg/kg (mouse)
Dermal	LD50	750 mg/kg
Inhalative	LC50/4h	1.25 mg/l

7789-23-3 potassium fluoride

Oral	LD50	98 mg/kg (mouse)
		223 mg/kg (rat)
		148 mg/kg (rat, female)

- **Primary irritant effect:**
- **On the skin:** Based on available data, the classification criteria are not met.
- **On the eye:** Based on available data, the classification criteria are not met.

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- **Sensitization:** Based on available data, the classification criteria are not met.

· **IARC (International Agency for Research on Cancer):**

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· **NTP (National Toxicology Program):**

None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**

None of the ingredients are listed.

· **Probable route(s) of exposure:**

Ingestion.
Inhalation.
Eye contact.
Skin contact.

· **Acute effects (acute toxicity, irritation and corrosivity):**

Toxic if swallowed, in contact with skin or if inhaled.

· **Repeated dose toxicity:** No relevant information available.

· **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.

· **Carcinogenicity:** Based on available data, the classification criteria are not met.

· **Reproductive toxicity:** Based on available data, the classification criteria are not met.

· **STOT-single exposure:** Based on available data, the classification criteria are not met.

· **STOT-repeated exposure:** Based on available data, the classification criteria are not met.

· **Aspiration hazard:** Based on available data, the classification criteria are not met.

12 Ecological information

· **Toxicity**

· **Aquatic toxicity** Toxic for aquatic organisms

· **Persistence and degradability** No relevant information available.

· **Bioaccumulative potential:** No relevant information available.

· **Mobility in soil:** No relevant information available.

· **Additional ecological information**

· **General notes:**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· **Other adverse effects** No relevant information available.

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

· **Uncleaned packagings**

· **Recommendation:** Disposal must be made according to official regulations.

· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

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14 Transport information

· UN-Number	
· DOT, ADR/RID/ADN, IMDG, IATA	UN3422
· UN proper shipping name	
· DOT	Potassium fluoride solution
· ADR/RID/ADN	POTASSIUM FLUORIDE SOLUTION, ENVIRONMENTALLY HAZARDOUS
· IMDG, IATA	POTASSIUM FLUORIDE SOLUTION
· Transport hazard class(es)	
· DOT	
· Class	6.1
· Label	6.1
· ADR/RID/ADN	
· Class	6.1 (T4)
· Label	6.1
· IMDG, IATA	
· Class	6.1
· Label	6.1
· Packing group	
· DOT, ADR/RID/ADN, IMDG, IATA	III
· Environmental hazards	Not applicable.
· Special precautions for user	Warning: Toxic substances
· Hazard identification number (Kemler code):	60
· EMS Number:	F-A,S-A
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture

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· **United States (USA)**

· **SARA**

· **Section 302 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients are listed.

· **TSCA (Toxic Substances Control Act)**

All ingredients are listed or exempt.

· **Proposition 65 (California)**

· **Chemicals known to cause cancer:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity for males:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

· **EPA (Environmental Protection Agency):**

None of the ingredients are listed.

· **IARC (International Agency for Research on Cancer):**

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· **Canadian Domestic Substances List (DSL):**

None of the ingredients are listed.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Abbreviations and acronyms:**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

OSHA: Occupational Safety & Health Administration

Acute Tox. 3: Acute toxicity – Category 3

· **Sources**

Website, European Chemicals Agency (echa.europa.eu)

Website, US EPA Substance Registry Services (ofmpub.epa.gov/sorinternet/registry/substreg/home/overview/home.do)

Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)

Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6

Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.

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Safety Data Sheets, Individual Manufacturers

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