

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** Potassium Fluoride, ACS
- **Article number:** 194873
- **CAS Number:**
7789-23-3
- **EC number:**
232-151-5
- **Index number:**
009-005-00-2
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
MP Biomedicals, LLC
29525 Fountain Parkway
Solon, OH 44139
United States
www.mpbio.com
- **Information department:** Product safety department
- **Emergency telephone number:** CHEMTREC: 1-800-424-9300 (1-703-527-3887)

2 Hazards identification

- **Classification of the substance or mixture**



GHS06 Skull and crossbones

- Acute Tox. 3 H301 Toxic if swallowed.
- Acute Tox. 3 H311 Toxic in contact with skin.
- Acute Tox. 3 H331 Toxic if inhaled.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Toxic

Toxic by inhalation, in contact with skin and if swallowed.

- **Information concerning particular hazards for human and environment:** Not applicable.

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



GHS06

- **Signal word** *Danger*
- **Hazard-determining components of labelling:**
potassium fluoride
- **Hazard statements**
Toxic if swallowed, in contact with skin or if inhaled.
- **Precautionary statements**
If medical advice is needed, have product container or label at hand.

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Keep out of reach of children.

Read label before use.

Avoid breathing dust/fume/gas/mist/vapours/spray.

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

Remove/Take off immediately all contaminated clothing.

Specific treatment (see on this label).

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**

| | | |
|------------|---|----------------|
| HEALTH | 3 | Health = 3 |
| FIRE | 0 | Fire = 0 |
| REACTIVITY | 0 | Reactivity = 0 |

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Substances**

· **CAS No. Description**

7789-23-3 potassium fluoride

· **Identification number(s)**

· **EC number:** 232-151-5

· **Index number:** 009-005-00-2

4 First aid measures

· **Description of first aid measures**

· **General information:**

Immediately remove any clothing soiled by the product.

Remove breathing apparatus only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· **After inhalation:**

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:** Do not induce vomiting; immediately call for medical help.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

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- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **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**
Thorough dedusting.
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:** 15-30 °C
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Protect from humidity and water.
Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

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· **Control parameters**

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

7789-23-3 potassium fluoride

| | |
|-----|------------------------------------|
| PEL | 2.5 mg/m ³ as F |
| REL | 2.5 mg/m ³ as F |
| TLV | 2.5 mg/m ³ as F, BEI |

· **Ingredients with biological limit values:**

7789-23-3 potassium fluoride

| | |
|-----|---|
| BEI | 2 mg/L urine prior to shift Fluoride (background, nonspecific) |
| | 3 mg/L urine end of shift Fluoride (background, nonspecific) |

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing.
- Wash hands before breaks and at the end of work.
- Store protective clothing separately.
- Avoid contact with the eyes and skin.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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· Eye protection: Not required.

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

| | |
|--------------------|-----------------|
| · Form: | Solid |
| · Color: | Not determined. |
| · Odor: | Characteristic |
| · Odour threshold: | Not determined. |

| | |
|-------------|-----------------|
| · pH-value: | Not applicable. |
|-------------|-----------------|

· Change in condition

| | |
|--------------------------------|-------------------|
| · Melting point/Melting range: | 857 °C (1575 °F) |
| · Boiling point/Boiling range: | 1500 °C (2732 °F) |

| | |
|----------------|-----------------|
| · Flash point: | Not applicable. |
|----------------|-----------------|

| | |
|----------------------------------|---------------------------|
| · Flammability (solid, gaseous): | Product is not flammable. |
|----------------------------------|---------------------------|

· Ignition temperature:

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

| | |
|------------------|-----------------|
| · Auto igniting: | Not determined. |
|------------------|-----------------|

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

· Explosion limits:

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

| | |
|-------------------------------------|-------|
| · Vapour pressure at 20 °C (68 °F): | 0 hPa |
|-------------------------------------|-------|

| | |
|-----------------------------|---|
| · Density at 20 °C (68 °F): | 2.49 g/cm ³ (20.779 lbs/gal) |
|-----------------------------|---|

| | |
|--------------------|-----------------|
| · Relative density | Not determined. |
|--------------------|-----------------|

| | |
|------------------|-----------------|
| · Vapour density | Not applicable. |
|------------------|-----------------|

| | |
|--------------------|-----------------|
| · Evaporation rate | Not applicable. |
|--------------------|-----------------|

· Solubility in / Miscibility with

| | |
|---------------------------|---------|
| · Water at 20 °C (68 °F): | 485 g/l |
|---------------------------|---------|

| | |
|--|-----------------|
| · Partition coefficient (n-octanol/water): | Not determined. |
|--|-----------------|

· Viscosity:

| | |
|---------------------|-----------------|
| · Dynamic: | Not applicable. |
| · Kinematic: | Not applicable. |
| · Organic solvents: | 0.0 % |

| | |
|-------------------|---------|
| · Solids content: | 100.0 % |
|-------------------|---------|

| | |
|--------------------|------------|
| · Molecular weight | 58.1 g/mol |
|--------------------|------------|

| | |
|---------------------|--|
| · Other information | No further relevant information available. |
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10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

| | | |
|---|------|-----------------|
| · LD/LC50 values that are relevant for classification: | | |
| 7789-23-3 potassium fluoride | | |
| Oral | LD50 | 245 mg/kg (rat) |

- **Primary irritant effect:**

- **on the skin:** No irritant effect.

- **on the eye:** No irritating effect.

- **Sensitization:** No sensitizing effects known.

- **Additional toxicological information:**

- **Carcinogenic categories**

| | | |
|---|--------------------|---|
| · IARC (International Agency for Research on Cancer) | | |
| 7789-23-3 | potassium fluoride | 3 |

- **NTP (National Toxicology Program)**

| |
|--------------------------|
| Substance is not listed. |
|--------------------------|

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
 - Water hazard class 1 (Assessment by list): slightly hazardous for water
 - Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

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13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

| | |
|---|--|
| <ul style="list-style-type: none"> · UN-Number · DOT, ADR, IMDG, IATA | UN1812 |
| <ul style="list-style-type: none"> · UN proper shipping name · DOT, IMDG, IATA · ADR | POTASSIUM FLUORIDE, SOLID 1812 POTASSIUM FLUORIDE, SOLID |
| <ul style="list-style-type: none"> · Transport hazard class(es) · DOT | <div style="text-align: center;">  </div> |
| <ul style="list-style-type: none"> · Class · Label | 6.1 Toxic substances. 6.1 |
| <ul style="list-style-type: none"> · ADR, IMDG, IATA | <div style="text-align: center;">  </div> |
| <ul style="list-style-type: none"> · Class · Label | 6.1 Toxic substances 6.1 |
| <ul style="list-style-type: none"> · Packing group · DOT, ADR, IMDG, IATA | III |
| <ul style="list-style-type: none"> · Environmental hazards: · Marine pollutant: | No |
| <ul style="list-style-type: none"> · Special precautions for user · Danger code (Kemler): · EMS Number: | Warning: Toxic substances 60 F-A,S-A |
| <ul style="list-style-type: none"> · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| <ul style="list-style-type: none"> · UN "Model Regulation": | UN1812, POTASSIUM FLUORIDE, SOLID, 6.1, III |

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15 Regulatory information

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

· **Sara**

· **Section 355 (extremely hazardous substances):**

Substance is not listed.

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

Substance is not listed.

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

Substance is listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

Substance is not listed.

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

Substance is not listed.

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

Substance is not listed.

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

Substance is not listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

Substance is not listed.

· **TLV (Threshold Limit Value established by ACGIH)**

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· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

Substance is not listed.

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

Substance is not listed.

· **GHS label elements**

The substance is classified and labelled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS06

· **Signal word Danger**

· **Hazard-determining components of labelling:**

potassium fluoride

· **Hazard statements**

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

· **Precautionary statements**

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

Keep out of reach of children.

Read label before use.

Avoid breathing dust/fume/gas/mist/vapours/spray.

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IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

Remove/Take off immediately all contaminated clothing.

Specific treatment (see on this label).

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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.

· **Department issuing MSDS:** Product safety department

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (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

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

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

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent