1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier
Product Number 873
Product Name Anions in Soil

Synonyms None

Recommended use of the chemical and restrictions on use
Recommended Use Laboratory use only
Uses advised against No information available

Details of the supplier of the safety data sheet
Supplier ERA a Waters Company
Supplier Address 16341 Table Mountain Parkway, Golden, CO 80403 USA
Non-Emergency Telephone Number +1-303-431-8454
Supplier Email sdsinfo@waters.com
Emergency telephone number
Company Emergency Phone In case of EMERGENCY call CHEMTREC Day or Night
Number Within USA and Canada: 800-424-9300
International Call Collect: +1-703-527-3887

2. HAZARDS IDENTIFICATION

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

<table>
<thead>
<tr>
<th>Acute toxicity - Oral</th>
<th>Category 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity - Dermal</td>
<td>Category 3</td>
</tr>
<tr>
<td>Acute toxicity - Inhalation (Gases)</td>
<td>Category 3</td>
</tr>
<tr>
<td>Acute toxicity - Inhalation (Vapors)</td>
<td>Category 3</td>
</tr>
<tr>
<td>Acute toxicity - Inhalation (Dusts/Mists)</td>
<td>Category 3</td>
</tr>
</tbody>
</table>

GHS Label elements, including precautionary statements

Emergency Overview

Signal word Danger

Hazard Statements
Toxic if inhaled

Appearance Brown
Physical state Solid->Powder(s)
Odor No information 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/protective clothing/eye protection/face protection
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area

Precautionary Statements - Response
Specific treatment (see .? on this label)

Skin
IF ON SKIN: Wash with plenty of soap and water
Call a POISON CENTER or doctor/physician if you feel unwell
Remove/Take off immediately all contaminated clothing
Wash contaminated clothing before reuse

Inhalation
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor/physician

Ingestion
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Rinse mouth

Precautionary Statements - Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Not applicable

Unknown Toxicity
99.85 % of the mixture consists of ingredient(s) of unknown toxicity

Other information
No information available

Interactions with Other Chemicals
No information available.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Note: only the components contributing to the product's GHS hazard classification are listed in this section.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium Fluoride</td>
<td>7789-23-3</td>
<td>0.008 - 0.15</td>
</tr>
</tbody>
</table>

### 4. FIRST AID MEASURES

**First aid measures**

**General Advice**
Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

**Eye contact**
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Seek immediate medical attention/advice.

**Skin contact**
Immediate medical attention is required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

**Inhalation**
Remove to fresh air.

**Ingestion**
Do NOT induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

**Most important symptoms and effects, both acute and delayed**
Coughing and/or wheezing. Difficulty in breathing.
Effects
Indication of any immediate medical attention and special treatment needed

Notes to Physician
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media
CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical
No information available.

Uniform Fire Code
Highly Toxic: Solid

Combustible DUST/POWDER

Hazardous Combustion Products
Carbon oxides.

Explosion Data
Sensitivity to Mechanical Impact
No.

Sensitivity to Static Discharge
No.

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
Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas.

Other Information
Refer to protective measures listed in Sections 7 and 8.

Environmental precautions
Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so.

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.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling
Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Do not breathe dust. Avoid generation of dust. Use only with adequate ventilation and in closed systems.

Conditions for safe storage, including any incompatibilities

Storage
Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Protect from moisture. Store locked up. Store away from other materials.

Incompatible Products
None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines
This product, as supplied, does not contain any hazardous materials with occupational
exposure limits established by the region specific regulatory bodies

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium Fluoride</td>
<td>TWA: 2.5 mg/m$^3$ F</td>
<td>TWA: 2.5 mg/m$^3$ F TWA: 2.5 mg/m$^3$ dust (vacated) TWA: 2.5 mg/m$^3$</td>
<td></td>
</tr>
</tbody>
</table>

Other Exposure Guidelines
Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992)

Appropriate engineering controls

Engineering Measures
Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection
Wear safety glasses with side shields (or goggles).

Skin and body protection
Wear protective gloves and protective clothing. Long sleeved clothing. Chemical resistant apron. Impervious gloves.

Respiratory protection
No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hygiene Measures
Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. No information available. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Do not breathe dust. Contaminated work clothing should not be allowed out of the workplace.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical state
Solid->Powder(s)

Appearance
Brown

Color
No information available

Odor
No information available

Odor Threshold
No information available

Property
pH
Melting / freezing point
Boiling point / boiling range
Flash Point
Evaporation Rate
Flammability (solid, gas)
Flammability Limit in Air
Upper flammability limit
Lower flammability limit
Vapor pressure
Vapor density
Specific Gravity
Water Solubility
Solubility in other solvents
Partition coefficient: n-octanol/water
Autoignition temperature
Decomposition temperature
Kinematic viscosity
Dynamic viscosity
Explosive properties
Oxidizing properties

Values
no data available
no data available
no data available
no data available
no data available
no data available
no data available
no data available
no data available
no data available
no data available
no data available
no data available
no data available
no data available
no data available
no data available
no data available
no data available
no data available
no data available

Remarks
None known
None known
None known
None known
None known
None known
None known
None known
None known
None known
None known
None known
None known
None known
None known
None known
None known
None known

Method

Other Information

Softening Point
no data available

Particle Size
no data available
10. STABILITY AND REACTIVITY

Reactivity

no data available.

Chemical stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Hazardous Polymerization
Hazardous polymerization does not occur.

Conditions to avoid
Excessive heat.

Incompatible materials
None known based on information supplied.

Hazardous Decomposition Products
Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation
Specific test data for the substance or mixture is not available. Toxic by inhalation. (based on components).

Eye contact
Specific test data for the substance or mixture is not available.

Skin contact
Specific test data for the substance or mixture is not available. Toxic in contact with skin. May be absorbed through the skin in harmful amounts. (based on components).

Ingestion
Specific test data for the substance or mixture is not available. Toxic if swallowed. (based on components).

Component Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium Fluoride</td>
<td>= 245 mg/kg (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>7789-23-3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Information on toxicological effects

Symptoms
Coughing and/ or wheezing. Difficulty in breathing.

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

Sensitization
No information available.

Carcinogenicity
Contains no ingredient listed as a carcinogen.

Reproductive toxicity
No information available.

STOT - single exposure
No information available.

STOT - repeated exposure
No information available.

Chronic toxicity
No known effect based on information supplied. Effects from this product caused by acute exposure may cause permanent damage to target organs and/or may cause chronic conditions.

Target Organ Effects
Respiratory system. Systemic Toxicity.

Aspiration Hazard
No information available.

Numerical measures of toxicity

Product Information

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)
245.00 mg/kg
873 - Anions in Soil

ATEmix (dermal)
300.00 mg/kg (ATE)

ATEmix (inhalation-gas)
700.00 ppm (4 hr)

ATEmix (inhalation-dust/mist)
0.50 mg/L

ATEmix (inhalation-vapor)
3.00 ATEmix

12. ECOLOGICAL INFORMATION

Ecotoxicity
The environmental impact of this product has not been fully investigated.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Toxicity to Algae</th>
<th>Toxicity to Fish</th>
<th>Toxicity to Microorganisms</th>
<th>Daphnia Magna (Water Flea)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium Fluoride</td>
<td>96h LC50: = 9.3 mg/L (Ctenopharyngodon idella)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Persistence and Degradability
No information available.

Bioaccumulation
No information available

Other adverse effects
No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal methods
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Packaging
Dispose of contents/containers in accordance with local regulations.

This product contains one or more substances that are listed with the State of California as a hazardous waste.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Hazardous Waste</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium Fluoride</td>
<td>Toxic</td>
</tr>
</tbody>
</table>

14. TRANSPORT INFORMATION

DOT
Proper Shipping Name
NON REGULATED
Hazard Class
N/A

TDG
Not regulated

MEX
Not regulated

ICAO
Not regulated

IATA
Proper Shipping Name
NON REGULATED
### 15. REGULATORY INFORMATION

**International Inventories**

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA</td>
<td>Complies</td>
</tr>
<tr>
<td>DSL/NDSL</td>
<td>All components are listed either on the DSL or NDSL.</td>
</tr>
</tbody>
</table>

**US Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or 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**

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Acute Health Hazard</th>
<th>Chronic Health Hazard</th>
<th>Fire Hazard</th>
<th>Sudden release of pressure hazard</th>
<th>Reactive Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Answer</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

**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**


### International Regulations

<table>
<thead>
<tr>
<th>Component</th>
<th>Carcinogen Status</th>
<th>Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium Fluoride</td>
<td></td>
<td>Mexico: TWA 2.5 mg/m³</td>
</tr>
<tr>
<td>7789-23-3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Canada**

**WHMIS Hazard Class**

Not determined

### 16. OTHER INFORMATION

**NFPA**

<table>
<thead>
<tr>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Instability</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**HMIS**

<table>
<thead>
<tr>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Physical Hazard</th>
<th>Physical and Chemical Hazards</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>X</td>
</tr>
</tbody>
</table>

Prepared By

Product Stewardship