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

GHS product identifier

Product Name                Calcium Chloride Solid

Other means of identification

Synonyms                   Briners Grade, EXPRESS®, FCC Dry Food Grade Calcium Chloride, TETRA 94™, TETRA Flake

Recommended use of the chemical and restrictions on use

Recommended Use             For Diverse Applications

Uses advised against        No information available

Supplier’s details

Manufacturer Address        TETRA Technologies, Inc.
                            24955 Interstate 45 North
                            The Woodlands, TX 77380
                            TEL: 281-367-1983 (Non-Emergency Number)

Emergency telephone number

Emergency Telephone Number  CHEMTREC: 1-800-424-9300 for US/ 703-527-3887 outside US

2. HAZARDS IDENTIFICATION

Classification

Serious Eye Damage/Eye Irritation Category 2

GHS Label elements, including precautionary statements

Emergency Overview

Signal Word          Warning
Hazard Statements
• Causes serious eye irritation
### Appearance
White

### Physical State
Flake or pellet.

### Odor
Odorless

### Precautionary Statements

#### Prevention
- Wash face, hands and any exposed skin thoroughly after handling.
- Wear eye/face protection.

#### 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.

#### Storage
- None

#### Disposal
- None

### Hazard Not Otherwise Classified (HNOC)
Not applicable

### Other information
Wear hand protection

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Synonyms
Briners Grade, EXPRESS®, FCC Dry Food Grade Calcium Chloride, TETRA 94™, TETRA Flake

#### Chemical Name | CAS-No | Weight %
--- | --- | ---
Calcium Chloride | 10043-52-4 | 74-100
Water | 7732-18-5 | 0-26
Sodium chloride | 7647-14-5 | < 3
Potassium Chloride | 7447-40-7 | < 3
Magnesium chloride | 7786-30-3 | < 0.5

### 4. FIRST AID MEASURES

#### Description of necessary first-aid measures

**Eye Contact**
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Obtain medical attention if irritation persists

**Skin Contact**
Wash off immediately with soap and plenty of water. Get medical attention if irritation develops and persists.

**Inhalation**
Move to fresh air. Get medical attention immediately if symptoms occur.

**Ingestion**
Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Drink plenty of water. Consult a physician.
Protection of First-aiders Use personal protective equipment.

Most important symptoms/effects, acute and delayed

Most Important Symptoms/Effects Irritation

Indication of immediate medical attention and special treatment needed, if necessary

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 None

Specific Hazards Arising from the Chemical
Avoid generating dust, under certain conditions may cause respiratory irritation. Thermal decomposition can lead to release of irritating and toxic gases and vapors.

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 Avoid contact with the skin and the eyes. Use personal protective equipment. Avoid dust formation.

Environmental Precautions

Environmental Precautions Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas. See Section 12 for additional Ecological Information.

Methods and materials for containment and cleaning up

Methods for Containment Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry.

Methods for Cleaning Up Take up mechanically and collect in suitable container for disposal. Use personal protective equipment.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Ensure adequate ventilation. Wear personal protective equipment. Avoid contact with skin and eyes. Wash thoroughly after handling. Avoid breathing dust. Avoid dust formation. Minimize dust generation and accumulation.

Conditions for safe storage, including any incompatibilities

Storage Keep container tightly closed in a dry and well-ventilated place. Keep in properly labeled containers. Keep in a dry place.
Incompatible Products

Zinc, Bromine trifluoride. Methyl vinyl ether

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

Exposure Guidelines

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium Chloride</td>
<td>ACGIH - (TLV-TWA) Guideline for nuisance particulate (inhaalable particulate): 10 mg/m³</td>
<td>OSHA (PEL-TWA) - Z-3 Mineral Dusts, Inert or Nuisance dusts, (respirable fraction): 5 mg/m³</td>
<td>-</td>
</tr>
</tbody>
</table>

Appropriate engineering controls

Engineering Measures

Provide local exhaust ventilations system. When there is a potential for exposure, an emergency eyewash and safety shower should be provided within the immediate work area.

Individual protection measures, such as personal protective equipment

Eye/Face Protection

Wear safety glasses with non-flexible side shields or chemical goggles

Skin and Body Protection

Hands and Feet:

Wear appropriate protective non-leather protective gloves and boots. Chemical protective gloves and boots such as PVC, Neoprene, or Heavy Nitrile are recommended. Leather products do not offer adequate protection and will dehydrate with resultant shrinkage and possible distruption.

Body:

Wear appropriate protective, impervious clothing.

Respiratory Protection

A respirator is not indicated under normal operating conditions. Use of a NIOSH - approved respirator (N95 or greater) should be based on the presence of nuisance dusts.

Hygiene Measures

When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use. Provide regular cleaning of equipment, work area and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks/ - Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Flake or pellet</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>White</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable</td>
<td>None known</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>175-770 °C / 350-1420 °F</td>
<td>Estimated value(s)</td>
</tr>
<tr>
<td>Boiling Point/Boiling Range</td>
<td>175-1930 °C / 350-3500 °F</td>
<td>Estimated value(s)</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not applicable</td>
<td>None known</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Flammability Limits in Air</td>
<td></td>
<td></td>
</tr>
<tr>
<td>upper flammability limit</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>lower flammability limit</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not applicable</td>
<td>None known</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not applicable</td>
<td>None known</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>(H2O=1) 2.15 @ 77°F / 25°C</td>
<td>None known</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>40% @ 68°F (20°C) with evolution of heat</td>
<td></td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not applicable</td>
<td>None known</td>
</tr>
</tbody>
</table>
Flammable Properties  Not flammable  
Explosive Properties  No data available  
Oxidizing Properties  No data available  

Other information  
VOC Content (%)  Not applicable.

### 10. STABILITY AND REACTIVITY

**Reactivity**

No data available.

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of hazardous reactions**

Not expected under recommended storage conditions.

**Hazardous Polymerization**

Hazardous polymerization does not occur.

**Conditions to avoid**

Dust formation.

**Incompatible materials**

Zinc, Bromine trifluoride. Methyl vinyl ether

**Hazardous decomposition products**

Hydrogen chloride gas and oxides

### 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure**

**Product Information**

- **Inhalation**: May cause irritation of respiratory tract.
- **Eye Contact**: Irritating to eyes.
- **Skin Contact**: May cause irritation.
- **Ingestion**: May cause irritation.

**Component Information**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LD50 Oral (mg/kg)</th>
<th>LD50 Dermal (mg/kg)</th>
<th>LC50 Inhalation (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium Chloride</td>
<td>2301 (Rat)</td>
<td>2630 (Rat)</td>
<td>-</td>
</tr>
<tr>
<td>Potassium Chloride</td>
<td>2600 (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>3 (Rat)</td>
<td>&gt; 10 (Rabbit)</td>
<td>&gt; 42 (Rat) 1 h</td>
</tr>
</tbody>
</table>

**Symptoms related to the physical, chemical and toxicological characteristics**

**Symptoms**: May cause irritation to the respiratory system.
Delayed and immediate effects and also chronic effects from short and long term exposure

Eye damage/irritation
- Irritating to eyes.

Sensitization
- No information available.

Mutagenic Effects
- No information available.

Carcinogenicity
- Contains no ingredients above reportable quantities listed as a carcinogen.

Reproductive Toxicity
- No information available.

STOT - single exposure
- No information available.

STOT - repeated exposure
- No information available.

Chronic Toxicity
- Avoid repeated exposure.

Aspiration Hazard
- No information available.

Numerical measures of toxicity - Product
- No information available.

### 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

<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>Calcium Chloride</td>
<td>LC50 96 h: = 10650 mg/L</td>
<td>LC50 96 h: = 750-1020 mg/L</td>
<td>LC50 96 h: = 1060 mg/L</td>
<td>LC50 48 h: = 2400 mg/L</td>
</tr>
<tr>
<td></td>
<td>static (Lepomis macrochirus)</td>
<td>static (Pimephales promelas)</td>
<td>static (Lepomis macrochirus)</td>
<td>(Daphnia magna)</td>
</tr>
<tr>
<td>Potassium Chloride</td>
<td>EC50 72 h: = 2500 mg/L</td>
<td>LC50 96 h: = 5560 - 6080 mg/L</td>
<td>LC50 96 h: = 4747 - 7824 mg/L</td>
<td>EC50 48 h: = 825 mg/L</td>
</tr>
<tr>
<td>7447-40-7</td>
<td>(Desmodesmus subspicatus)</td>
<td>flow-through (Lepomis macrochirus)</td>
<td>flow-through (Oncorhynchus mykiss)</td>
<td>EC50 48 h: = 83 mg/L Static</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LC50 96 h: = 12946 mg/L static (Lepomis macrochirus)</td>
<td>(Daphnia magna)</td>
<td>(Daphnia magna)</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>LC50 96 h: = 5620 - 7070 mg/L</td>
<td>LC50 96 h: = 6420 - 6700 mg/L</td>
<td>LC50 96 h: = 340.7 - 469.2 mg/L</td>
<td>EC50 48 h: = 1000 mg/L</td>
</tr>
<tr>
<td>7647-14-5</td>
<td>(Pimephales promelas) static (Pimephales promelas)</td>
<td>static (Pimephales promelas)</td>
<td>static (Lepomis macrochirus)</td>
<td>(Daphnia magna)</td>
</tr>
</tbody>
</table>

**Persistence and Degradability**
- Product is not biodegradable.

**Bioaccumulation**
- Does not bioaccumulate

**Other Adverse Effects**
- No information available.

### 13. DISPOSAL CONSIDERATIONS

**Waste 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**
- Do not re-use empty containers.

### 14. TRANSPORT INFORMATION
15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Legend</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA</td>
<td>United States Toxic Substances Control Act Section 8(b) Inventory</td>
</tr>
<tr>
<td>DSL</td>
<td>Canadian Domestic Substances List/Non-Domestic Substances List</td>
</tr>
</tbody>
</table>

U.S. Federal Regulations

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

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Yes/No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Health Hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Chronic Health Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Fire Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Sudden Release of Pressure Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Reactive Hazard</td>
<td>No</td>
</tr>
</tbody>
</table>

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.

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated by state right-to-know regulations.

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazard</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical and Chemical Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>0</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health Hazard</th>
<th>Flammability</th>
<th>Physical Hazard</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>X</td>
</tr>
</tbody>
</table>
Prepared By: TETRA Technologies, Inc.
sds@tetratec.com
Issuing Date: 15-Nov-2004
Revision Date: 04-Jan-2016
Revision Note: Updated Sections 5 & 10

General Disclaimer
The information provided on this SDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of Safety Data Sheet