



# SAFETY DATA SHEET

Issuing Date 15-Nov-2004

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Revision Number 4

## 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

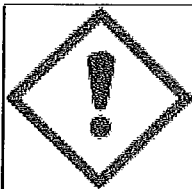
### Classification

Acute Oral Toxicity	Category 4
Serious Eye Damage/Eye Irritation	Category 2

### GHS Label elements, including precautionary statements

### Emergency Overview

Signal Word	Warning
Hazard Statements	
<ul style="list-style-type: none"><li>• Harmful if swallowed</li><li>• Causes serious eye irritation</li></ul>	

**Appearance** White**Physical State** Flake or pellet.**Odor** Odorless**Precautionary Statements****Prevention**

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

**General Advice**

- None

**Eyes**

- 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.

**Ingestion**

- IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
- Rinse mouth.

**Storage**

- None

**Disposal**

- Dispose of contents/container to an approved waste disposal plant.

**Hazard Not Otherwise Classified (HNOC)**

Not applicable

**Other information**

Wear hand protection

0% of the mixture consists of ingredient(s) of unknown toxicity.

**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	IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell Rinse mouth.
Protection of First-aiders	Use personal protective equipment.

**Most important symptoms/effects, acute and delayed**

Most Important Symptoms/Effects No information available.

**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 tri-fluoride, Methyl vinyl ether

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Control parameters

#### Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Calcium Chloride 10043-52-4	ACGIH - (TLV-TWA) Guideline for nuisance particulate (inhalable particulate): 10 mg/m <sup>3</sup>	OSHA (PEL-TWA) - Z-3 Mineral Dusts, Inert or Nuisance dusts, (respirable fraction): 5 mg/m <sup>3</sup>	-

### 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 destruction.  
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

<b>Physical State</b>	Flake or pellet	<b>Appearance</b>	White
<b>Odor</b>	Odorless	<b>Odor Threshold</b>	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks / Method</u>
pH	Not applicable	None known
Melting Point/Range	175-770 °C / 350-1420 °F	Estimated value(s)
Boiling Point/Boiling Range	175-1930 °C / 350-3500 °F	Estimated value(s)
Flash Point	Not applicable	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limits in Air		
upper flammability limit	No data available	
lower flammability limit	No data available	
Vapor Pressure	Not applicable	None known
Vapor Density	Not applicable	None known
Specific Gravity	(H <sub>2</sub> O=1) 2.15 @ 77°F / 25°C	None known
Water Solubility	40% @ 68°F (20°C) with evolution of heat	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition Temperature	No data available	None known
Decomposition Temperature	No data available	None known
Viscosity	Not applicable	None known
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

Can only take place at very high temperature producing chlorine gas.

Hazardous Polymerization

Hazardous polymerization does not occur.

Conditions to avoid

Dust formation.

Incompatible materials

Zinc, Bromine tri-fluoride, Methyl vinyl ether

Hazardous decomposition products

Chlorine gas.

## 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	Harmful if swallowed.

#### Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Calcium Chloride	= 1000 mg/kg ( Rat )	= 2630 mg/kg ( Rat )	-
Potassium Chloride	= 2600 mg/kg ( Rat )	-	-
Sodium chloride	= 3 g/kg ( Rat )	> 10 g/kg ( Rabbit )	> 42 g/m <sup>3</sup> ( Rat ) 1 h

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

Symptoms	May cause irritation to the respiratory system.
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### 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

Acute Toxicity	0% of the mixture consists of ingredient(s) of unknown toxicity.
<i>The following values are calculated based on chapter 3.1 of the GHS document:</i>	
LD50 Oral	979 mg/kg; Acute toxicity estimate
LD50 Dermal	2630 mg/kg; Acute toxicity estimate

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Calcium Chloride 10043-52-4		LC50 96 h: = 10650 mg/L static (Lepomis macrochirus)		LC50 48 h: = 2400 mg/L (Daphnia magna)
Potassium Chloride 7447-40-7	EC50 72 h: = 2500 mg/L (Desmodesmus subspicatus)	LC50 96 h: 750-1020 mg/L static (Pimephales promelas) LC50 96 h: = 1060 mg/L static (Lepomis macrochirus)		EC50 48 h: = 825 mg/L (Daphnia magna) EC50 48 h: = 83 mg/L Static (Daphnia magna)

Sodium chloride 7647-14-5		LC50 96 h: 5560 - 6080 mg/L flow-through (Lepomis macrochirus) LC50 96 h: = 12946 mg/L static (Lepomis macrochirus) LC50 96 h: 6020 - 7070 mg/L static (Pimephales promelas) LC50 96 h: = 7050 mg/L semi-static (Pimephales promelas) LC50 96 h: 6420 - 6700 mg/L static (Pimephales promelas) LC50 96 h: 4747 - 7824 mg/L flow-through (Oncorhynchus mykiss)		EC50 48 h: = 1000 mg/L (Daphnia magna) EC50 48 h: 340.7 - 469.2 mg/L Static (Daphnia magna)
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**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

**DOT** Not regulated

**TDG** Not regulated

**MEX** Not regulated

### 15. REGULATORY INFORMATION

#### International Inventories

TSCA Complies  
DSL Complies

#### Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory  
DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

#### 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**

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

**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				
<b>NFPA</b>	Health Hazard 1	Flammability 0	Instability 1	Physical and Chemical Hazards
<b>HMIS</b>	Health Hazard 1	Flammability 0	Physical Hazard 1	Personal Protection X

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**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