Calcium Chloride, Anhydrous

File: MSDS: C-102
Supersedes 28 AUG 96

TETRA Technologies, Inc. Material Safety Data Sheet

This MSDS Sheet complies with the style format specified by ANSI Z400.1-1993

SECTION 1: CHEMICAL PRODUCT - COMPANY IDENTIFICATION

TETRA Technologies, Incorporated (713) 367-1983
25025 I-45 North (800) 327-7817
The Woodlands, Texas 77380

(800) 424-9300 - CHEMTREC (24 Hour Emergency Response)

SUBSTANCE:	Calcium Chloride, Anhydrous
TRADE NAMES/SYNONYMS:	Briners Grade Calcium Chloride, Express®, FCC Dry Food Grade Calcium Chloride, TETRA94™, TETRA94 Ice Blaster™, Winter Thaw
CHEMICAL FAMILY:	Inorganic Salt
MSDS CREATION DATE:	07 FEB 94
MSDS REVISION DATE:	19 JAN 01

SECTION 2: COMPOSITION, INFORMATION ON INGREDIENTS

COMPONENTS:	Calcium Chloride
CAS NUMBER:	10043-52-4
RTECS NUMBER:	EV9800000
PERCENTAGE:	90 - 100%
PROBABLE CONTAMINANT:	Calcium Carbonate, Calcium Hydroxide, Calcium Oxide, Alkali Metal Chlorides, Alkaline Earth Metal Chlorides

SECTION 3: HAZARDS IDENTIFICATION

NFPA RATINGS: (SCALE 0-4): HEALTH=1, FIRE=0, REACTIVITY=1
POTENTIAL HEALTH EFFECTS:
INHALATION, SKIN CONTACT, EYE CONTACT: May cause irritation
INGESTION: May cause nausea.

SECTION 4: FIRST AID MEASURES

INHALATION: Remove from exposure area to fresh air.
SKIN CONTACT: Remove contaminated clothing and shoes. Wash affected area with soap or mild detergent.
EYE CONTACT: Flush eyes water or normal saline solution

SECTION 5: FIRE FIGHTING MEASURES

FIRE AND EXPLOSION HAZARD: Negligible fire hazard when exposed to heat or flame.
EXTINGUISHING MEDIA: Dry chemical, carbon dioxide, water spray or regular foam. For larger fires, use water spray, fog or regular foam (1996 North American Emergency Response Guidebook, RSPA P 5800.7).
FIREFIGHTING: Move container(s) from fire area if you can without risk. Apply cooling water to sides of containers that are exposed to flames until well after fire is out. Extinguish fire using agent suitable for type of surrounding fire and/or

chemicals. Do not use water directly on material. Avoid breathing corrosive vapors; keep upwind. Dike area to prevent runoff and contamination of water sources.

HAZARDOUS COMBUSTION PRODUCTS: Thermal decomposition products may include toxic and corrosive fumes of chlorine and hydrogen chloride. Product generates heat upon addition of water, with possible spattering. Product may react with some metals (aluminum, zinc, tin, etc.) to release flammable hydrogen gas.

SECTION 6: ACCIDENTAL RELEASE MEASURES

OCCUPATIONAL SPILL: For dry spills place material in covered, clean, dry container for disposal.

SECTION 7: HANDLING AND STORAGE

Observe all federal, state and local regulations when storing this product. Store in a tightly closed container. Store away from incompatible materials.

SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE LIMITS: No occupational exposure limits established by OSHA/ACGIH/NIOSH.
VENTILATION: Provide local exhaust ventilation system.
EYE PROTECTION: Wear safety glasses with splash shields or safety goggles/shield.
CLOTHING: Wear appropriate protective (impervious) clothing.
GLOVES: Wear appropriate protective gloves.
RESPIRATOR: Use of a NIOSH approved respirator should be based on contamination levels in the workplace or situation. When warranted, use a face mask particulate respirator with a NIOSH N95 rating such as Moldex 2800N95, MSA 816581 or 3M 8576PN5.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

DESCRIPTION: Colorless to White, deliquescent crystals.
FORMULA: $CaCl_2$
MOLECULAR WEIGHT: 110.99
MELTING POINT: 1440°F (>1600°C)
SPECIFIC GRAVITY: 2.15 @ 77°F (25°C)
WATER SOLUBILITY: 40% @ 68°F (20°C) with evolution of heat
SOLVENT SOLUBILITY: Soluble in alcohol, acetic acid and acetone

SECTION 10: STABILITY AND REACTIVITY

REACTIVITY: Reacts exothermically with water.
CONDITIONS TO AVOID: May burn but does not ignite readily. Flammable, poisonous gases may accumulate in tanks and hopper cars. May ignite combustibles (wood, paper, oil, etc.).
INCOMPATIBILITIES:

Boric Oxide + Calcium Oxide:	Possible violent incandescent reaction.
Bromine Trifluoride:	Possible violent reaction.
Furan-2-Peroxycarboxylic Acid:	Explodes.

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Metals: Corrosive in the presence of moisture.
Methyl Vinyl Ether: May initiate exothermic polymerization.
Zinc: Corrodes, releasing flammable hydrogen gas.

HAZARDOUS DECOMPOSITION: Thermal decomposition products may include toxic and corrosive fumes of chlorine.
POLYMERIZATION: Does not occur under normal temperatures and pressures.

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICITY DATA (ANHYDROUS CALCIUM CHLORIDE):

TD_{LO}: 112g/kg, oral, 20 weeks, rat
LD_{LO}: 274 mg/kg, subcutaneous, dog
LD_{50}: 1000 mg/kg, oral, rat
LD_{50}: 264 mg/kg, intraperitoneal, rat
Mutagenic data and tumorigenic data-see Registry of Toxic Effects of Chemical Substances (RTECS) file.

CARCINOGEN STATUS: None.
LOCAL EFFECTS: Eye, mucous membrane and skin irritant.
ACUTE TOXICITY LEVEL: Moderately toxic by ingestion, slightly toxic by dermal absorption.

SECTION 12: ECOLOGICAL INFORMATION

No data available.

SECTION 13: DISPOSAL INFORMATION

Observe all federal, state and local regulations when disposing of this substance.

SECTION 14: TRANSPORT INFORMATION

DOT Shipping Name-ID Number: Non-regulated.

SECTION 15: REGULATORY INFORMATION

TSCA STATUS:	Yes
DSL STATUS:	Yes
EINECS STATUS	Yes
OTHER TSCA ISSUES:	None
SARA 311 CLASSIFICATION:	Acute Hazard Reactivity Hazard
CALIFORNIA PROPOSITION 65:	No ingredients found on the Propositions 65 list

SECTION 16: OTHER INFORMATION

Individuals handling this product should be informed of the recommended safety precautions and should have access to this information.

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This information relates to the specific product designated and may not be valid for such product used in combination with any other materials or in any other processes. Such information is to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to its accuracy, reliability, or completeness. It is the user's responsibility to satisfy themselves as to the suitability and completeness of such information for their own particular use. We do not accept liability for any loss or damage that may occur from the use of this information nor do we offer warranty against patent infringement.

TETRA Technologies, Incorporated reserves the right to refuse shipment of this product to any consumer who fails to demonstrate the ability to consistently handle and use it safely and in compliance with all applicable laws, rules and regulations. Such demonstration may require on-site inspection of any or all storage, processing, packaging and other handling systems that come in contact with it.

Customers are responsible for compliance with local, state and federal regulations that may be pertinent in the storage, application and disposal of this product.