



MATERIAL SAFETY DATA SHEET

Product Name Calcium Hardness Increaser
Product id 2025-AZ
Revision date 20/12/2006

Revision: 1

1. Identification of the substance & the company

Chemical name Calcium Chloride

Chemical family Inorganic salts

Supplier NAVA Water Products
95 MacCorkle Ave. SW, South Charleston, WV 25303 , USA
Tel: (304) 746-3000

Emergency Telephone Chemtrec (800)424-9300
Medical 1-800-420-9236

2. Composition / information on ingredients

Components CAS	Weight %	ACGIH-TLV Data	OSHA (PEL) Data
CALCIUM CHLORIDE 10043-52-4	94-97	Not determined	Not determined
SODIUM CHLORIDE 7647-14-5	1-2	Not determined	Not determined
POTASSIUM CHLORIDE 7447-40-7	2-3	Not determined	Not determined
Water 7732-18-5	0-2	Not determined	Not determined

3. Hazards identification

Emergency overview *White to off-white pellets. Odorless.
Irritant to eyes
May cause skin irritation*

Potential Health Effects:

- Eye Contact

Pellets may cause mild irritation to the eyes. Dusts may cause severe irritation with corneal injury. Effects may be slow to heal. When dissolving, the heat produced may cause more intense effects as well as thermal burns.



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- **Skin contact** Short single exposure not likely to cause significant skin irritation. Prolonged or repeated exposure may cause skin irritation even a burn. May cause more severe response if skin is damp or if material is confined to skin.
- **Inhalation** Vapors are unlikely due to physical properties. Dust may cause irritation to upper respiratory tract.
- **Ingestion** May cause gastrointestinal irritation.

4. First-aid measures

- Eye contact** Holding the eyelids apart, flush eyes promptly with copious flowing water for at least 20 minutes. Get medical attention immediately.
- Skin contact** Remove contaminated clothing. Wash skin thoroughly with mild soap and plenty of water for at least 15 minutes. Wash clothing before re-use. Get medical attention if irritation occurs and persists.
- Inhalation** In case of dust inhalation, remove person to fresh air. Keep him quiet and warm. Apply artificial respiration if necessary and get medical attention immediately.
- Ingestion** If swallowed, wash mouth thoroughly with plenty of water and give water to drink. Get medical attention immediately.

NOTE: Never give an unconscious person anything to drink.

- Note to physician** Treat symptomatically and supportively.

5. Fire - fighting measures

- Flash point** None
- Flammable/Explosion limits** Not applicable
- Auto-ignition temperature** Not available
- Suitable extinguishing media** Material is not combustible. Use extinguishing media appropriate to surrounding fire conditions.
- Fire fighting procedure** Cool containers with water spray. In closed stores, provide fire-fighters with self-contained breathing apparatus in positive pressure mode. Contain runoff to prevent entry into water or drainage systems.



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5. Fire - fighting measures

Unusual fire and explosion hazards Heat is generated when product mixes with water

6. Accidental release measures

Personal precautions Wear appropriate safety clothing and eye/face protection (see Section 8)
Slipping hazard due to spilled product

Methods for cleaning up Small spills: contain spilled material if possible. Collect in suitable and properly labeled containers.
Large spills: Dike area to prevent spill from spreading. Collect in suitable and properly labeled containers.
Wash spill site with water after material pickup is complete.

Environmental precautions Prevent from entering into soil, ditches, sewers waterways and/or groundwater.

7. Handling and storage

Handling Avoid producing or diffusing dust into the air.
Avoid bodily contact.
Heat developed during dilluting or dissolving is very high. Use cool water (temperature less than 80°F, 27°C)

Storage Keep containers tightly closed. Keep in a dry place.
Do not store in zinc.

8. Exposure controls / personal protection

Ventilation requirements Use local exhaust as necessary, especially under dusty conditions.
Ventilation must be sufficient to maintain TLV-TWA below 10 mg/m³ (ACGIH recommendation for Particulates (Insoluble) Not Otherwise Specified (PNOS)).

Personal protective equipment:

- **Respiratory protection** Not normally required; In case of dust formation use an approved particulate respirator.
- **Hand protection** Protective gloves
- **Eye protection** Safety glasses or goggles
- **Skin and body protection** Body covering clothes and boots



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Hygiene measures Safety shower and eye bath should be provided.
Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking

9. Physical and chemical properties

Appearance White pellets, odourless
Melting point/range ~772°C (1424°F)
Boiling point/range >815°C
Vapour pressure <0.005 mmHg (20°C)
Vapor density Not applicable
Solubility:
- Solubility in water Soluble
Specific gravity 2.2
Decomposition temperature Not available
Partition coefficient (n-octanol/water) Not applicable

10. Stability and reactivity

Stability Hygroscopic.
Stable under normal conditions
Materials to avoid Flammable hydrogen may be generated from contact with metals such as: zinc, sodium.
Heat is generated when mixed with water. Spattering and boiling can occur.
Corrosive when wet.
Avoid contact with sulfuric acid.
Conditions to avoid Exposure to moisture
Hazardous decomposition products None
Hazardous polymerization Will not occur

11. Toxicological information

Acute toxicity:
- Rat oral LD50 967-1668 mg/kg
- Rabbit dermal LD50 > 5000 mg/kg
Chronic toxicity Not available

Mutagenicity For Calcium Chloride, in vitro genetic toxicity studies were negative.



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11. Toxicological information

Carcinogenicity Not classified by IARC.
Not included in NTP 11th Report on Carcinogens.

12. Ecological information

Note: Based largely or completely on data for major component.
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50 >100 mg/L in most sensitive species).

Persistence and degradability Inhibitory concentration (IC50) in OECD Activated Sludge Respiration Inhibition Test is greater than 1000 mg/L

13. Disposal considerations

Waste disposal Do not dump into sewers, on the ground, or into any body of water
Observe all federal, state and local environmental regulations when disposing of this material.

14. Transportation information

DOT Not regulated

IMO Not regulated

ICAO/IATA Not regulated

15. Regulatory information

USA Reported in the EPA TSCA Inventory

Sara 313 This product does not contain a chemical listed at or above de minimis concentrations.

Sara (311, 312) hazard class This product is categorized as an immediate health hazard.

- Pennsylvania right to know list Listed



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- WASTE CLASSIFICATIONS	Not listed under CERCLA
- Workplace Classification	This product is considered hazardous under the OSHA Hazard Communication Standard (29CFR 1910.1200).
Canada	Listed in DSL
WHMIS hazard class	D2B toxic materials

16. Other information

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End of safety data sheet