

MATERIAL SAFETY DATA SHEET
EM SCIENCE

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufacturer.....: Preparation Date.: 3/1/91
EM SCIENCE
A Division of EM Industries Information Phone Number.: 856-423-
6300
P.O. Box 70 Hours: Mon. to Fri. 8:30-5
480 Democrat Road Chemtrec Emergency Number: 800-424-
9300
Gibbstown, N.J. 08027 Hours: 24 hrs a day

Catalog Number(s):
2123 CX0255 CX0256 2121

Product Name:
Calcium Nitrate
Synonyms:
Nitric Acid Calcium Salt (Tetrahydrate)
Chemical Family:
Inorganic Salt
Formula:
Ca(NO3)2.4H2O
Molecular Weight.: 236.15

2. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS #	Appr %
Calcium Nitrate	13477-34-4	100%

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
HEAT, SHOCK OR CONTACT WITH OTHER MATERIALS MAY CAUSE FIRE OR EXPLOSION.
IRRITATING TO SKIN, EYES AND MUCOUS MEMBRANES.
DELIQUESCENT.

Appearance:
White crystals or flakes

POTENTIAL HEALTH EFFECTS (ACUTE AND CHRONIC)

Symptoms of Exposure:
-Irritating to skin and eyes on contact; eye irritation can be severe

Medical Cond. Aggravated by Exposure:
Data not available.

Routes of Entry:
Inhalation, ingestion

Carcinogenicity:
The material is not listed (IARC, NTP, OSHA) as cancer causing agent.

4. FIRST AID MEASURES

Emergency First Aid:
GET MEDICAL ASSISTANCE FOR ALL CASES OF OVEREXPOSURE.
Skin: Wash thoroughly with soap and water.

Eyes: Immediately flush thoroughly with water for at least 15 minutes.
Inhalation: Remove to fresh air; give artificial respiration if breathing has stopped.
Ingestion: If conscious, drink water and induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person.

5. FIRE FIGHTING MEASURES

Flash Point (F) : None
Flammable Limits LEL (%): N/A
Flammable Limits UEL (%): N/A
Extinguishing Media . . :
Use any suitable for adjacent material.

Fire Fighting Procedures:
Wear self-contained breathing apparatus.

Fire & Explosion Hazards:
Shock, or mixture with reducers can cause explosion.

6. ACCIDENTAL RELEASE MEASURES

Spill Response:
Evacuate the area of all unnecessary personnel.
Wear suitable protective equipment listed under Exposure / Personal Protection.
Eliminate any ignition sources until the area is determined to be free from explosion or fire hazards.
Contain the release and eliminate its source, if this can be done without risk.
Take up and containerize for proper disposal as described under Disposal.
Comply with Federal, State, and local regulations on reporting releases. Refer to Regulatory Information for reportable quantity and other regulatory data.

7. HANDLING AND STORAGE

Handling & Storage:
Keep container closed.
Store in a cool, dry, well-ventilated area
Store away from reducing and combustible materials
Do not get in eyes, on skin or on clothing

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT:
Ventilation, Respiratory Protection, Protective Clothing, Eye Protection:
Material should be handled or transferred in an approved fume hood or with adequate ventilation.
Protective gloves (Neoprene, PVC or equivalent) should be worn to prevent skin contact
Safety glasses with side shields must be worn at all times.

Work/Hygenic Practices:
Wash thoroughly after handling.
Do not take internally.
Eye wash and safety equipment should be readily available.

EXPOSURE GUIDELINES

OSHA - PEL:

Component	TWA		STEL		CL		Skin
	PPM	MG/M3	PPM	MG/M3	PPM	MG/M3	
Calcium Nitrate							

ACGIH - TLV

Component	TWA		STEL		CL		Skin
	PPM	MG/M3	PPM	MG/M3	PPM	MG/M3	
Calcium Nitrate							

If there are no exposure limit numbers listed in the Exposure Guidelines chart, this indicates that no OSHA or ACGIH exposure limits have been established.

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point (C 760 mmHg) : N/A
Melting Point (C) : 45C
Specific Gravity (H2O = 1) : 1.82
Vapor Pressure (mm Hg) . . . : N/A
Percent Volatile by vol (%) : N/A
Vapor Density (Air = 1) . . : N/A
Evaporation Rate (BuAc = 1) : N/A
Solubility in Water (%) . . : Soluble
Appearance :
White crystals or flakes

10. STABILITY AND REACTIVITY

Stability: Yes

Hazardous Polymerization:
Does not occur

Hazardous Decomposition:
Nitrogen compounds

Conditions to Avoid:
Extreme heat, shock, contact with reducing materials

Materials To Avoid:
 Water
 Acids
 Bases
 Corrosives
 Oxidizers
 Other: Reducing agents, Combustible material

11. TOXICOLOGICAL INFORMATION

Toxicity Data
orl-rat LD50: 3900 mg/kg

Toxicological Findings:
None
Cited in Registry of Toxic Effects of Chemical Substances (RTECS)

12. DISPOSAL CONSIDERATIONS

EPA Waste Numbers: D001
Treatment:
Specified Technology - Contact your local permitted waste

disposal site (TSD) for permissible treatment sites.
ALWAYS CONTACT A PERMITTED WASTE DISPOSER (TSD) TO ASSURE
COMPLIANCE WITH ALL CURRENT LOCAL, STATE AND FEDERAL REGULATIONS.

13. TRANSPORT INFORMATION
DOT Proper Shipping Name:
Calcium Nitrate

DOT ID Number :
UN1454

14. REGULATORY INFORMATION
TSCA Statement:
This product is a "Mixture". The CAS numbers of all components
are listed on the TSCA Inventory.

Component	SARA EHS (302)	SARA EHS TPQ (lbs)	CERCLA RQ (lbs)
Calcium Nitrate			
-			
Component	OSHA Floor List	SARA 313	DeMinimis for SARA 313 (%)
Calcium Nitrate			

If there is no information listed on the regulatory information chart,
this indicates that the chemical is not covered by the specific
regulation listed.

15. OTHER INFORMATION
Comments:
None

NFPA Hazard Ratings:
Health : 2
Flammability : 0
Reactivity : 0
Special Hazards : OXY

Revision History: 6/1/84 5/28/86 9/26/86 3/14/87 10/27/87 5/22/89

| = Revised Section
N/A = Not Available
N/E = None Established

The statements contained herein are offered for informational purposes
only and
are based upon technical data that EM SCIENCE believes to be accurate.
It is
intended for use only by persons having the necessary technical skill
and at
their own descretion and risk. Since conditions and manner of use are
outside
our control, we make NO WARRENTY, EXPRESS OR IMPLIED, OR
MERCHANTABILITY,
FITNESS OR OTHERWISE.