

**Science Kit
& Boreal
Laboratories**

177 East Park Drive
17700 Bristlewood
Mason, Michigan 48854-1001

MATERIAL SAFETY DATA SHEET

MSDS No. 113067
Effective Date

SECTION I NAME

| | | | |
|-------------------|---|---------------|---|
| Product | Calcium Nitrate, Tetrahydrate | HEALTH | 2 |
| Chemical Synonyms | | FLAMMABILITY | 0 |
| Formula | Ca(NO ₃) ₂ · 4H ₂ O | REACTIVITY | 3 |
| RTECS # | EW9300000 | HAZARD RATING | |
| C.A.S. No. | 1347734-4 | LEAST | 0 |
| | | SLIGHT | 1 |
| | | MODERATE | 2 |
| | | HIGH | 3 |
| | | EXTREME | 4 |

SECTION II HAZARDOUS INGREDIENTS OF MIXTURES

| Principal Hazardous Component(s) | % | TLV Units |
|----------------------------------|---|-----------|
| MA - Not Applicable | | |
| NE - None Established | | |

SECTION III PHYSICAL DATA

| | | | |
|-------------------------|--------------------------|---|------|
| Melting Point (°F) | 45°C | Specific Gravity (H ₂ O = 1) | 2.36 |
| Boiling Point (°F) | NA | Percent Volatile by Volume (%) | NA |
| Vapor Pressure (mm Hg) | NA | Evaporation Rate (Air = 1) | NA |
| Vapor Density (Air = 1) | NA | | |
| Solubility in Water | Extremely | | |
| Appearance and Odor | White crystals, no odor. | | |

SECTION IV FIRE AND EXPLOSION HAZARD DATA

| | | | | |
|---------------------------|--|-------------------------------------|-------|-------|
| Flash Point (Method Used) | NA | Flammable Limits in Air % by Volume | Lower | Upper |
| Extinguisher Media | Use any medium suitable for extinguishing supporting life. | | | |

SPECIAL FIREFIGHTING PROCEDURES

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Not combustible, but is a hazardous oxidizing material. In contact with easily oxidizable substances may cause ignitor, violent combustion or explosion. Increases the flammability of combustible materials.

SECTION V HEALTH HAZARD DATA

Threshold Limited Value

NE

Effects of Overexposure

Irritation by all exposure routes.

Emergency and First Aid Procedures

SKIN: Remove any contaminated clothing. Wash skin with soap and water for at least 15 minutes. Get medical attention if irritation develops or worsens. **EYES:** Wash eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately. **INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician. **INGESTION:** If swallowed, induce vomiting immediately by giving two glasses of water and sticking finger down throat. Never give anything by mouth to an unconscious person. Call a physician immediately.

SECTION VI REACTIVITY DATA

| | | | |
|-----------|----------|---------------------|------|
| Stability | Unstable | Conditions to Avoid | Heat |
| | Stable | | |

Incompatibility (Materials to avoid)

Easily oxidizable materials, ammonium, hydrazine.

Hazardous Decomposition Products

Nitrogen oxides.

Hazardous Polymerization

Will Not Occur

X

SECTION VII SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled
Avoid contact with oxidizable materials. Remove all sources of ignition. Ventilate area of leak or spill. Clean-up personnel may require protection from inhalation of dust. Spills: Clean up in a manner that does not disperse dust into the air.

Waste Disposal Method

Disposal: Whatever cannot be saved for reclamation may be disposed in a RCRA-approved waste facility. Do not flush to the sewer.

Discharge, treatment, or disposal may be subject to federal, state, or local laws.

SECTION VIII SPECIAL PROTECTION INFORMATION

| | | | |
|--------------------------------------|----------------------|---|---------------|
| Respirator Protection (Specify Type) | Dust | | |
| Ventilation | Local Exhaust | X | Special Other |
| | Mechanical (General) | X | |

Protective Gloves

Vinyl or Rubber

Eye Protection

Goggles.

SECTION IX SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing
Store in a cool, dry location.
Keep container tightly closed when not in use.

Other Precautions

Read label on container before using.

For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

| | | | | | | |
|----------|---|------|----------|----------|-----------|-----------------------------|
| Rev. No. | 2 | Date | 11/20/87 | Approved | K. Kuchel | Chemical Safety Coordinator |
|----------|---|------|----------|----------|-----------|-----------------------------|

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and compatibility.

D.O.T. Calcium nitrate, Oxidizer, UN1454

Approved by U.S. Department of Labor "essentially similar" to form OSHA 20

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