

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Lithium Nitrate Solution
CHEMICAL FAMILY: Lithium Salts
MOLECULAR FORMULA: LiNO₃
ALTERNATE TRADE NAME(S): Lifetime[®] N Admixture, Renew[®] Concrete Treatment
GENERAL USE: Industrial Manufacturing

MANUFACTURER
FMC CORPORATION
Lithium Division
P.O. Box 795
Bessemer City, NC 28016-0795
General Information: (704) 868-5300

Emergency Telephone Numbers:
CHEMTREC (800) 424-9300
Emergency Phone (704) 629-5361 (Plant) Call Collect 24 Hr/Day
Emergency Phone (303) 595-9048 (Medical) Call Collect

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt. %</u>
Lithium nitrate	7790-69-4	30 - 40
Water	7732-18-5	60 - 70

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

IMMEDIATE CONCERNS: Strong oxidizer if the solution is allowed to evaporate. Clear, odorless, water white to yellow solution.

POTENTIAL HEALTH EFFECTS: May be irritating to the eyes, skin and mucous membranes.

COMMENTS:
(See Section 11, Toxicological Information)

4. FIRST AID MEASURES

EYES: Flush with water for at least 15 minutes. If irritation occurs and persists, obtain medical attention.

SKIN: Wash with plenty of soap and water. Get medical attention if irritation occurs and persists.

INGESTION: Drink 1 or 2 glasses of water and induce vomiting by touching the back of the throat with a finger or by giving syrup of ipecac. Never induce vomiting or give anything by mouth to an unconscious person. Contact a medical doctor.

INHALATION: Remove to fresh air. If breathing difficulty or discomfort occurs and persists, obtain medical attention.

NOTES TO MEDICAL DOCTOR:

This product is estimated to have mild irritation to eyes, skin, and mucous membranes, and to have moderate oral toxicity. Treatment is controlled removal of exposure followed by symptomatic and supportive care.

5. FIRE FIGHTING MEASURES

<u>FLAMMABLE LIMITS:</u>	Upper: Not available Lower: Not available.
<u>GENERAL HAZARD:</u>	Oxidizer. If water solvent evaporates, the remaining solid is an oxidizing material. Contact of this solid with easily oxidizable or combustible materials may cause fire or explosion upon ignition from any source.
<u>EXTINGUISHING MEDIA:</u>	Use water only. Do not use dry chemical, CO2 or Halon.
<u>HAZARDOUS COMBUSTION PRODUCTS:</u>	Oxygen, nitric oxide
<u>FIRE FIGHTING PROCEDURES:</u>	Wear full protective clothing and self-contained breathing apparatus (SCBA) approved for fire fighting. This is necessary to protect against the hazards of heat, products of combustion and oxygen deficiency. Do not breathe smoke, gases or vapors generated.
<u>AUTOIGNITION TEMPERATURE:</u>	Not applicable
<u>PROPERTIES CONTRIBUTING TO FLAMMABILITY:</u>	Oxidizer
<u>FLASH POINT:</u>	Not applicable
<u>SENSITIVITY TO STATIC DISCHARGE:</u>	Not applicable
<u>SENSITIVITY TO IMPACT:</u>	Not applicable

COMMENTS:
(See Section 10, Stability and Reactivity)

6. ACCIDENTAL RELEASE MEASURES

<u>RELEASE NOTES:</u>	Keep combustibles (wood, paper, oil etc.) away from spilled material. Contain spill with absorbant. Transfer to suitable container and clean spillage with an absorbant. Before cleanup measures begin, review the entire MSDS with particular attention to Section 3, Emergency Overview and Potential Health Effects; and Section 8, Recommended Personal Protective Equipment.
------------------------------	--

7. HANDLING AND STORAGE

<u>HANDLING:</u>	Do not get in eyes, on skin or clothing. Avoid breathing vapors. Wash thoroughly after handling.
<u>STORAGE:</u>	Store away from readily oxidizable materials, strong acids and flammable materials. Keep container closed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS

<u>Chemical Name</u>	<u>TWA (ACGIH)</u>	<u>STEL/Ceiling (ACGIH)</u>	<u>PEL (OSHA)</u>	<u>STEL/Ceiling (OSHA)</u>
PNOC ¹ , inhalable particulate	10 mg/m ³			
PNOC ¹ , respirable particulate	3 mg/m ³			

¹PNOC = Particulates Not Otherwise Classified.

ENGINEERING CONTROLS:

Use local exhaust ventilation to keep airborne concentrations below exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Eyes And Face:

Safety glasses or goggles

Respiratory:

When engineering controls are not adequate, wear a NIOSH/MSHA respirator approved for protection against inorganic dusts and mists.

Protective Clothing:

Rubber gloves

Work Hygienic Practices:

Quick-drench eyewash and safety shower.

9. PHYSICAL AND CHEMICAL PROPERTIES

ODOR:

Odorless

APPEARANCE:

Clear, water white to yellow solution

pH:

(5% solution) @ 25°C: 7-9.5

PERCENT VOLATILE:

Not applicable

VAPOR PRESSURE:

Not applicable

VAPOR DENSITY:

Not applicable

BOILING POINT:

110°C (230°F) to 120°C (248°F)

MELTING POINT:

Not applicable

SOLUBILITY IN WATER:

Miscible in any proportion

EVAPORATION RATE(Butyl Acetate = 1):

Not applicable

SPECIFIC GRAVITY:

1.2 to 1.3 g/cc at 25°C (77°F)

MOLECULAR WEIGHT:

68.95 (LiNO₃)

COEFF. OIL/WATER:

Not available

ODOR THRESHOLD:

Not applicable

FLAMMABLE LIMITS:

Upper: Not available Lower: Not available.

FLASH POINT:

Not applicable

AUTOIGNITION TEMPERATURE:

Not applicable

EXPLOSIVE PROPERTIES:

Not explosive

OXIDIZING PROPERTIES:

Oxidizer

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID:

If the solution is heated or otherwise allowed to evaporate, the remaining solid is an oxidizer, which releases oxygen on heating. This oxygen will intensify any fire in the immediate situation.

STABILITY:

Stable

POLYMERIZATION:

Does not polymerize

HAZARDOUS DECOMPOSITION

None

PRODUCTS:

INCOMPATIBLE MATERIALS:

Combustibles, organic and oxidizable materials (such as paper, wood, cotton and solvents)

11. TOXICOLOGICAL INFORMATION

Eye Contact:

No data available for the product.
Lithium nitrate: moderately irritating (rabbit)

[FMC Study I99-2280]

<u>Skin Contact:</u>	No data available for the product. Lithium nitrate: mildly irritating (rabbit)	[FMC Study I99-2282]
<u>Skin Absorption:</u>	No data available for the product. Lithium nitrate:LD ₅₀ > 2000 mg/kg (rat)	[FMC Study I99-2277]
<u>Ingestion:</u>	No data available for the product. Lithium nitrate: LD ₅₀ (rat) = 1426 mg/kg	[FMC Study I99-2283]
<u>Inhalation:</u>	LC ₅₀ (rat)> 5.93 mg/L/4 hr. (rat) (maximum attainable concentration) (Lithium nitrate 30% aqueous solution)	[FMC Study I99-2313]

Acute Effects From Overexposure:

This product has low inhalation toxicity and expected to have low oral and dermal toxicity. Product may be irritating to the eyes, skin and mucous membranes.

Chronic Effects From Overexposure:

No data available for the product.

Sensitization:

No

Carcinogenicity:

EH40: Not listed.

IARC: Not listed.

NTP: Not listed.

OSHA: Not considered a carcinogen under OSHA.

ACGIH: Not listed

Mutagenicity:

No

Reproductive Toxicity:

No

12. ECOLOGICAL INFORMATION

Ecotoxicological Information:

No data available for the product.

Chemical Fate Information:

No data available for the product.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD:

Dispose of waste according to local and Federal laws and regulations.

14. TRANSPORT INFORMATION

UN NUMBER:

None

PROPER SHIPPING NAME:

None

CLASSIFICATION:

None

LABELS:

None

PACKING GROUP: None
CUSTOM TARIFF NO: 2834.29.6050
MARINE POLLUTANT: No
PIH: Not designated Inhalation Hazard by US DOT.

15. REGULATORY INFORMATION

UNITED STATES

SECTION 311 HAZARD CATEGORY (40 CFR 370): Immediate (Acute) Health Hazard
SECTION 313 REPORTABLE INGREDIENTS (40 CFR 372): This product contains lithium nitrate which is subject to the reporting requirements of Section 313 of the Emergency Planning and Right-To-Know Act of 1986. Water dissociable nitrate compounds are a category of compounds subject to this reporting requirement. They are reportable only when in aqueous solution. This information must be included in all MSDS's that are copied and distributed for this material.

SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355):
CERCLA HAZARDOUS SUBSTANCE (40 CFR 302.4):

Not listed

TSCA SEC 12B EXPORT NOTIFICATION:

Not listed

TSCA INVENTORY STATUS (40 CFR 710):

This product is not subject to TSCA 12 (b) Export Notification Requirements.
Listed

CANADA

WHMIS: Product Identification No.: None
Hazard Classification: Class D, Div. 2B (Irritant - eyes and skin)
Ingredient Disclosure List: Not listed

16. OTHER INFORMATION

REVISION SUMMARY: Revision # 7: Sections 14 and 15 revised.

NFPA RATING

HEALTH: 1
FLAMMABILITY: 0
REACTIVITY: 0
SPECIAL: OXY

This MSDS has been prepared to meet U. S. OSHA Hazard Communication Standard, 29 CFR 1910.1200 and Canada's Workplace Hazardous Materials Information System (WHMIS) requirements.

type 6b

Copyright 2009. FMC Corporation, Lithium Division. All Rights Reserved. FMC Lithium, the FMC Lithium logo, Lifetime and Renew are trademarks of FMC Corporation.