

## LiNO<sub>3</sub> Admixture

30% Solution

### PRODUCT

CAS Number: 7790-69-4

Chemical Formula LiNO<sub>3</sub>

### DESCRIPTION

LiNO<sub>3</sub> Admixture is a 30% lithium nitrate aqueous solution that is clear and can be colorless to yellow in appearance. It is a concrete admixture designed for the prevention and control of alkali-silica reactivity (ASR). ASR is a reaction that occurs in concrete between reactive silica from aggregates (both coarse and fine) and the highly alkaline cement paste. Resulting in the formation of a gel that absorbs water causing swelling which exerts expansive pressure, leading to cracking of the concrete. LiNO<sub>3</sub> Admixture suppresses ASR by forming dense products that protect reactive minerals from further reaction. It does not significantly increase hydroxide in the pore solution, thus significantly reduces the potential pessimum (expansion) effect. This makes LiNO<sub>3</sub> Admixture more effective at reducing ASR expansion compared to other lithium compounds.

### APPLICATIONS

LiNO<sub>3</sub> Admixture is a cost-effective method for controlling ASR, ideally suited for ready mix concrete products.

## PRODUCT SPECIFICATIONS

Parameters (Units)	Typical Specifications
Total solids (%)	Approx. 30
Density, at 25°C (g/cm <sup>3</sup> )	Approx. 1.20
pH, 1:6 dilution at 25°C	7 – 10
Freezing point (°C, °F)	- 8, 18
Boiling point (°C, °F)	100, 230

## DOSING

The “standard” (or “100%” or “normal”) dose is 0.55 gallon of LiNO<sub>3</sub> Admixture per cubic yard of concrete for every pound of sodium present in the cement. Dosage is dependent on the composition of the reactivity of the aggregate, and overall mix design.

The actual amount of LiNO<sub>3</sub> Admixture necessary to suppress deleterious expansions from ASR in concrete is determined by performance testing and dosing. Recommended test methods are a modified ASTM C1567 extended to 28 days as defined in COE CRD-C 662-10, at present the only standard performance test for lithium nitrate admixture. Contact ASG Chemie, for a copy of its recommended test method or further assistance in specification development and addition rates.

## PACKAGING

Product is packaged and shipped in 55-gallon polyethylene drums or 275-gallon IBC totes.

## SHELF LIFE AND STORAGE

Product should be stored in a cool and dry place in sealed, original containers away from direct sun light. Providing the product is kept in the original packaging, the shelf life is 12 months. Observe caution when handling corrosive materials. Please consult the material safety data sheet (MSDS) for safety and handling precautions.

ORDERS and  
TECHNICAL SUPPORT

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**LIMITED WARRANTY INFORMATION.****PLEASE READ CAREFULLY.**

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For more information or answers to questions about the use in specific applications, contact your Technical Sales Representative or call Toll Free 1.833.LITHUSA (1-833-548-4872).

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