

XEOLITH® LiNO₃ Admixture

Product Description:

XEOLITH® LiNO₃ 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.

XEOLITH® LiNO₃ 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 **XEOLITH® LiNO₃ Admixture** more effective at reducing ASR expansion than other lithium compounds.

Applications:

XEOLITH® LiNO₃ Admixture is a cost-effective method for controlling ASR, ideally suited for ready mix concrete products.

Chemical Formula:

LiNO₃

CAS No. :

7790-69-4

Specifications:

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

*Specifications are compliant with ANSI/NSF STD 61 and ASTM C 494 Type S

Dosing:

The “standard” (or “100%” or “normal”) dose is 0.55 gallon of **XEOLITH® LiNO₃ 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 **XEOLITH® LiNO₃ 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 Bisley International, LLC. for a copy of its recommended test method or further assistance in specification development and addition rates.

Disclaimer:

This document is for information purposes only. Customers are responsible for testing and confirming the suitability of this product in their application. To the extent permitted by law, no warranty as to merchantability or fitness of purpose, expressed or implied, is made.

Packaging:

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

Storage:

Product should be stored in a cool and dry place in sealed, original containers away from direct sunlight. Providing the product is kept in the original packaging, the shelf life is 12 months. For further safety information refer to product SDS available from your Bisley and Company contact.

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