

DPI ASR PREVENT

DESCRIPTION

DarCole ASR Prevent is a Lithium Nitrate liquid admixture that chemically mitigates ASR expansion. This admixture will extend the service life of the concrete. Alkali Silica Reactivity is a chemical reaction that can occur in concrete between the alkali in cement (Na_2Oe) and the silica in aggregates. This reaction causes a gel that absorbs water in the pore solution, expands, and causes the concrete to crack. DPI ASR Prevent has a minimum of 30% Lithium Nitrate by mass and weighs approximately 10.0lbs/gallon. DPI Prevent ASR does not contain calcium chloride or any chloride-based components.

ADVANTAGE

Improved durability, extends service life, provides ASR protection to the concrete from alkalis, no adverse effects on plastic or hardened concrete properties, Lithium Nitrate has more than 50 years of data on effectiveness in controlling ASR

APPLICATION

Dosage rates are determined based on the alkali content of the cement.

Dosage rate is calculated as follows:

1. Obtain the cement mill sheet and locate the " Na_2Oe " (alkali content). Per ASTM C 150, this is expressed as ($\text{Na}_2\text{O} + 0.685\text{K}_2\text{O}$).
2. Determine the amount of cement used in the mix design.
3. Divide the sodium equivalent by 100 to convert the percent to a decimal.
4. DPI ASR Prevent is dosed at 0.55 gallons for each pound of sodium equivalent.

MIX WATER ADJUSTMENT

A water adjustment must be made to allow for the water in the DPI ASR Prevent. This is necessary to maintain the specified w/c ration. The water in the mix should be reduced by as much as the water added through the addition of DPI ASR Prevent. The adjustment factor is 6.7lbs (0.8 gallons) of water for each gallon of DPI ASR Prevent used.

TRIAL MIX REQUIREMENT

It is strongly recommended that trial mixes be run prior to using DPI ASR Prevent. The dosages can be adjusted when used in combination with suitable pozzolans such as silica fume and some types of fly ash. This will allow the most effective dosage of DPI ASR Prevent to be determined based on the effectiveness of the pozzolans, the reactivity of the aggregate and the overall design of the mix.

PACKAGING

Available in 30 or 55 gallon drums and is delivered by tanker trucks for bulk purchasers. Must be dispersed separately but is compatible with most admixtures.

LIMITATIONS

Freeze below 20 degrees Fahrenheit. If it freezes, use mechanical agitation to reconstitute.

DISCLAIMER

The information in this publication is to the best of our knowledge, reliable. Users should make their own tests to determine the suitability of these products for their own particular purposes. DarCole Products, Inc. makes no warranty of any kind, express or implied, including those of merchantable and fitness for purpose. The responsibility of DarCole Products, Inc. for claims arising out of breach of warranty, negligence, strict liability, or otherwise are limited to the purchase price of the materials.



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