Impede® LN

ASR Inhibiting Admixture

DESCRIPTION:

Impede® LN is a lithium nitrate based admixture designed to mitigate ASR (alkali-silica reactivity) in concrete. Since the early 1950's Lithium compounds have shown an ability to control ASR. These findings were confirmed by the Strategic Highway Research Program (SHRP). ASR occurs when reactive silica, found in aggregates, is supplied with moisture and alkalis. An expansive gel is then created which results in cracking and premature deterioration of concrete. When using **Impede® LN** at recommended dosages ASR can be controlled. Dosages will vary depending on the sodium equivalent of cement (total alkali) and the addition of pozzolans such as Type F Fly Ash, GGBFS, and or silica fume.

Impede® LN is recommended for concrete mixes where the mitigation of ASR is desired.

ADVANTAGES:

- Improved durability of concrete
- Mitigates ASR expansion and cracking
- Allows use of local materials
- Extends service life of concrete
- Can be used with pozzolans
- No adverse effects on concrete
- Accelerates concrete set times from 5 – 20%

SPECIFICATIONS:

Conforms to ASTM C 494 Type C AASHTO M 194 Type C CRD C 87 Type C

DOSAGE RATE:

Impede® LN's dosage is based on the alkali content of the cement, however the dosage may be reduced depending on the ingredients of the mix and use of such pozzolans as Type F Fly Ash, GGBFS, or silica fume. To determine the beneficial effects of these pozzolans, additional testing must be conducted. Consult your local technical sales representative for further assistance.

DOSAGE RATE CALCULATION EXAMPLE:

1. Determine the amount of cement in the mix. (Example: 564 lbs)
2. Contact your local cement producer to acquire the alkali content of the cement. This is usually expressed as Na2 Oe.
3. Convert the Alkali content into a decimal by dividing the content by 100. (Example: 0.5% / 100 = .005)
4. Multiply the weight of cement by alkali decimal obtained in step 3 (564 x .005 = 2.82). This number represents pounds of alkali in your mix.
5. When using gal/yd3 multiply total pounds of alkali by 0.55 gallons (recommended dosage) of **Impede® LN** (0.55 x 2.82 = 1.55 gal/yd3)
6. When using **Impede® LN** the water content of the mix must be adjusted. For every gallon of **Impede® LN** the mix water content should be reduced by 0.8 gal to maintain the desired water-cementitious ratio. (1.55 gal. **Impede® LN** x 0.8 = 1.24 gal).

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7. When calculating metric use recommended dosage of 4.6 L/m3 and reduce mix water by 0.8 liter for every liter of **Impede® LN** added.

STORAGE

Impede® LN may freeze at temperatures below 5°F (2°C). Although freezing does not harm **Impede® LN**, precautions should be taken to protect it from freezing. If it should happen to freeze, thaw and reconstitute with mechanical agitations. **Do Not Use Pressurized Air For Agitation.**

COMPATIBILITY:

Impede® LN is compatible with all types of Portland cement, fly ash, slag, microsilica, fibers and approved air entraining admixtures. **Impede® LN** can be used in all white, colored, and architectural concrete. For best results, each admixture must be dispensed separately into the concrete mix. **Do Not add directly on the cement.**

PACKAGING:

55-gallon drums, 275-gallon totes, and bulk tank truck

Premiere™ Concrete Admixtures

Premiere Concrete Admixtures • P.O. Box 277 • 508 Cedar Street • Pioneer, OH 43554 • (800) 503-3418 • www.premiereadmix.com