

Product Data Sheet

SEA STAR CRETEFLOW

LIQUID SUPERPLASTICIZER-PCE (WATER REDUCER) FOR CONCRETE & MORTARS.

DESCRIPTION

CreteFlow is a super plasticizer (also known as a high range water reducer) of a new generation based on modified polycarboxylate ether polymers (PCE). It is designed for use in high quality concrete ready mix and precast concrete with high water reduction and slump retention ability. It increases the fluidity and workability of the mixtures without adding extra water. This allows for stronger, more durable concrete to be created for high-performance applications.

CreteFlow does not contain added chloride and conforms to chloride ion limits required by concrete industry standards.



TECHNICAL PROPERTIES

Appearance	Clear liquid
Color	Transparent to Yellow (Slightly Hazy)
Density, [g/cm ³]	Approx. 1.09 at 20 °C
Solids content, [w/w %]	50 + 1
pH-value (20 °C)	3-5
Frost Resistance	Please thaw and homogenize frozen material thoroughly at +20 °C
Storage class	12 (not flammable liquids)

TECHNICAL INFORMATION

CreteFlow provides improved rheological properties for a wide-range of concrete mixes. Performance of CreteFlow in concrete is superior to conventional superplasticizers due to its unique polycarboxylate ether design. Conventional superplasticizers, such as those based on sulphonated melamine and naphthalene formaldehyde condensates, at the same time of mixing, become absorbed onto the surface of the cement particles. This absorption takes place at a very early stage in the hydration process. The sulphonic groups of the polymer chains increase the negative charge on the surface of the cement particle and dispersion of the cement occurs by electrostatic repulsion.

The dispersion mechanism of CreteFlow is not only based on electrostatic repulsion but in also on steric hindrance. These properties are designed to achieve outstanding water reduction and workability retention without retardation of setting time.

APPLICATION FIELDS

- Ready mixed and precast concrete with the highest requirements on durability and quality
- Construction sites which need good workability retention and high early strength performance

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- Pumped concrete
- Concrete mixes at various w/c ratios
- Suitable for a broad range of different types of cement (high cement compatibility)

APPLICATION FIELDS

- Reduce water demand up to 10% to 25%
- Reduce shrinkage in concrete after curing
- Highly plasticizing (improves flowability & workability of the mixtures for high performance applications)
- Superior load bearing capacity
- Low bleeding or segregation tendencies
- Compatible with many other conventional admixtures

FEATURES AND BENEFITS

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|---------------------------|---|
| • High water reduction | High early strengths.
Low permeability, High durability concrete.
Extremely strong plasticizing properties. |
| • High flowability | Less vibration required.
Ease of placing and compaction.
No segregation. |
| • Low shrinkage and creep | Improves dimensional stability.
Reduces risk of cracks. |
| • Excellent cohesiveness | Ease of pumping. No bleeding. |
| • Superior finishing | Fair-faced concrete |
| • High elastic modulus | Superior load bearing capacity. |

STORAGE STABILITY

CreteFlow can be stored in its unopened original packaging at constant cool temperatures and protect from excessive heat. Stir thoroughly after longer storage periods. The product is prone to gas emission. Take care for a sufficient ventilation of storage and dosage-facilities.

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RECOMMENDED DOSAGE

0.6% to 1.6% by weight of cement.

The dosage may vary from the above range depending upon the mix design, raw materials and site requirements.

Mixing trials must be performed to determine the exact ratio.

SHELF LIFE

01 year in an unopened packaging.

PACKAGING

Available in 1kg, 5kg, 25kg & 200kg packing.