

Description:

B.C 102 NPC superplasticizer is a concrete admixture based on polycarboxylate. It is designed to increase the workability and slump of concrete and significantly reducing the water-to-cement ratio at a constant fluidity level to achieve higher final strength. This product is formulated to maintain slump over extended periods, making long-distance concrete transportation possible. It is highly suitable for producing self-consolidating concrete (SCC) and high-performance concrete (HPC). The polycarboxylate groups create both electrostatic forces and steric hindrance due to their hydrophilic side chains. This mechanism enhances the dispersion of particles, allowing the concrete to retain its fluidity for longer durations compared to other plasticizers. The polymer molecules adhere to the surface of cement particles, causing them to repel each other and preventing agglomeration. This leads to a homogeneous mixture where trapped water is released, resulting in improved workability. Furthermore, this homogeneity ensures uniform hydration by facilitating consistent water-cement contact.

Standards:

- ISIRI 2930-2: Table 3
- ASTM C1017
- ASTM C494-Type F
- EN 934-2

Applications:

- Producing highly fluid concrete
- High-speed concrete pouring
- Concrete placement with minimal equipment wear
- Execution of highly reinforced structures
- Execution of precast and in-situ concrete structures
- Pouring concrete into small and irregularly shaped sections
- Producing and placing concrete in hot weather
- Creating exposed architectural concrete



بتن شیمی

BETON
CHIMIE

ISO 9001:2008

تلفن:

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صندوق پستی:

۳۷۵۱۱۳۹۹۶۸

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کیفیت کلیه محصولات
بتن شیمی گارانتی
بیمه کارآفرین می باشد



Superplasticizer and High-Performance Water Reducer B.C

102 NPC

- Underwater concrete placements
- Building dams and large slabs
- Producing high-strength concrete
- Producing self-consolidating concrete (SCC)
- Producing impermeable concrete

Features and Benefits:

- Retains slump and workability over extended periods
- Enables long-distance concrete transport while maintaining workability
- Improves final strength compared to standard samples
- Reduces cement content at a constant strength
- Decreases segregation of aggregates
- Enhances concrete cohesion
- Improves pumpability
- Increases impermeability and durability of concrete
- Enhances the bond between concrete and steel
- Allows production of low water-cement ratio concrete
- Prevents air entrapment in concrete
- Reduces pump wear during concrete placement

Dosage:

The recommended dosage is between 0.5% and 1.0% (by weight of cement). For specific applications, the dosage should be determined by laboratory testing under varying environmental conditions and materials used.

Usage Instructions:

B.C 102 NPC superplasticizer is a ready-to-use liquid admixture that should be added during concrete preparation.

- Optimal performance is achieved when approximately 50%-70% of the mixing water is added before incorporating the admixture.



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بیمه کارآفرین

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102 NPC

- Never add this product to dry materials.
- Ensure thorough mixing for at least 60 seconds at high speed.

Storage:

- The product can be stored in its original sealed packaging for up to 12 months under appropriate conditions.
- Storage temperature: above +5°C.

Physical and Chemical Properties:

- Color: Brown
- Physical State: Liquid
- Specific Gravity: $1.05 \pm 0.03 \text{ g/cm}^3$
- pH: Approximately 7
- Solubility: Soluble in water
- Chloride Content: None

Packaging:

- Supplied in 20 kg cans and 250 kg drums.

Safety and Health:

- Do not ingest this product.
- Avoid prolonged skin contact.
- In case of skin contact, wash immediately with water.
- If swallowed, seek medical attention immediately.
- This product is non-flammable.

Technical Considerations:

- The optimal dosage should be determined through laboratory trials.
- Do not add this product to dry materials.
- For simultaneous use of multiple admixtures in the same concrete mix, consult the manufacturer beforehand.



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