

HIGH PERFORMANCE SET RETARDING CONCRETE ADMIXTURE

Description: SYRUP is a high-performance set retarding concrete admixture produced through a controlled chemical reaction process based on modified polysaccharide technology. It is specially formulated to delay the setting time of concrete in a controlled and predictable manner, without negatively affecting long-term strength development. SYRUP is particularly suitable for mass concrete, hot weather concreting, and long transportation applications, where extended workability and prevention of cold joints are critical.

Technical Properties:

Chemical Content	Modified polysaccharide
Appearance	Liquid
Color	Brown
Solid Content	40 ± 1 %
pH	6 -10
Density (20 °C)	1.26 – 1.32 g/cm ³
Chloride Content (%)	< 0.1
Alkaline Content (%)	< 5
Water Solubility	Completely soluble
Freezing	-10 °C

Advantage:

- Provides controlled and uniform setting time extension.
- Improves workability retention during long transportation periods.
- Reduces risk of cold joints in large pours.
- Ideal for hot weather concreting conditions.
- Enhances placement flexibility in complex structural elements.
- Maintains long-term mechanical strength performance.
- Reduces risk of early plastic cracking.
- Compatible with most commonly used concrete admixtures.
- Does not contain chloride or any other substances that may cause corrosion.

Area of Use:

- Ready-mix concrete plants with long dispatch and placement times.
- High temperature concreting.
- Mass concrete foundations and raft slabs to reduce thermal cracking risk.
- Dam, tunnel, and infrastructure projects.
- Pile concrete applications requiring extended workability.
- Slip-form and continuous casting systems.
- Large volume pours with staged placement.
- Deep foundation and diaphragm wall concrete.
- Bridge deck and large slab constructions.
- Concrete requiring extended finishing time.
- Projects where vibration and compaction time is extended.
- Concrete containing high cement content or high heat of hydration cement.
- Ready-mix exported over long distances.

Method of Application:

- SYRUP may be added to the mixing water or dosed directly into fresh concrete.
- For best results, it is recommended to add the product with mixing water to ensure uniform distribution.
- Ensure sufficient mixing time after addition.

Precautions in Application:

- Always perform laboratory and field trials before full-scale application.
- Dosage must be carefully adjusted according to cement type, ambient temperature, and required setting time.
- Excessive dosage may cause excessive setting delay or extended hardening time.
- Do not combine with accelerating or antifreeze admixtures unless validated by laboratory testing.

- Ensure uniform distribution by adding the product into mixing water or during batching under sufficient mixing time.
- Setting time may vary depending on cement composition, temperature, and mix design.
- In hot weather conditions, dosage adjustment may be required.
- Protect fresh concrete from rapid moisture loss during extended setting periods.
- Always verify compatibility when used with superplasticizers or other chemical admixtures.

Compatibility: SYRUP shows broad compatibility with most commonly used cement types and concrete admixture components. However, laboratory compatibility testing is strongly recommended prior to large-scale production. Compatible with:

- Portland cement (CEM I)
- Blended cements (CEM II, CEM III, etc.)
- Fly ash, slag, silica fume
- Lignosulfonate-based admixtures
- Polycarboxylate (PCE) superplasticizers
- Air-entraining agents
- Defoamers and viscosity modifying agents

Simultaneous use with accelerating or antifreeze admixtures is not recommended unless validated by laboratory testing.

Precautions in Application:

- Avoid contamination with foreign materials.
- Protect from freezing. If frozen, thaw at room temperature and mix thoroughly before use.
- Avoid prolonged exposure to high temperatures and direct sunlight.
- Use corrosion-resistant storage tanks and transfer lines.
- Do not mix with strong oxidizing agents.
- Ensure proper mixing to prevent phase separation during dilution.
- Improper formulation or incorrect dosage may significantly affect setting time and performance of the final admixture.
- The product should be incorporated into the formulation under continuous mechanical stirring.
- It can be blended with water, slump retention polymers, set regulators, defoamers, or other functional additives depending on the targeted performance.
- Dilution with deionized or clean industrial water is recommended when necessary.
- Mixing time and sequence should be optimized according to production equipment and formulation design.
- Laboratory and field trials must be conducted prior to large-scale production.



Cleaning: SYRUP is intended to be used as a primary dispersing component in the production of concrete admixtures.

Packing: 1000 kg container Bulk

Storage and Shelf Life: Must be stored at temperatures between +5°C and +35°C. Under proper storing conditions, the product's shelf life is 12 months from production date if kept in original packaging unopened and undamaged. Packaged products must be shaken before use.

Security Information: Use protective clothes, gloves, glasses and mask compatible with Health and Safety regulations during the application. It should not contact skin and eyes. In case it contacts to skin and eyes, rinse it with water and if swallowed ask for medical help. Food and beverage should not be allowed in the application area. It should be stored at the reach out of the children. The Material Safety Data Sheet (MSDS) should be read for detailed information.