



WATER-REDUCING/PLASTICIZING CONCRETE ADMIXTURE

Description: POLY 44 / 44 S / 44 W admixture is a superplasticizer that is based on Polynaphthalene Sulphonate formaldehyde condensate sodium is a highly effective dual-action liquid superplasticizer for the production of free-flowing concrete or as a substantial water-reducing agent for promoting high early and ultimate strength. This product is from selected polymers and is specially designed to enable the water content of the concrete to perform more effectively with a higher developed early strength. This effect can be used to improve workability, to increase ultimate strength or to facilitate a reduction in the cement content while sustaining mix properties.

Technical Properties:

Chemical Content	Polynaphthalene Sulphonate
Appearance	Liquid
Color	Brown
pH	6 - 9
Density (20 °C)	1.06 – 1.10 g/cm ³
Chloride Content (%)	< 0.1
Alkaline Content (%)	< 5
Freezing	-10 °C

Advantage:

- Cold-weather concreting to speed up setting and protect against delays in strength development.
- Application where fast stripping is needed.
- Precast and prestressed concrete production to allow early demolding and faster turnover.
- In slab and foundation, columns, architectural structures, and RCC concretes.
- Repair and rehabilitation projects where early opening to traffic or services is required.
- High-performance concrete mixes where reduced water-cement ratio and early strength are critical.
- Does not contain chloride or any other substances that may cause corrosion.

Area of Use:

- Application where long transporting is required.
- In slab and foundation, columns, architectural structures, and RCC concretes.
- It is suitable for concrete mixes that are stiff and have a high viscosity
- To obtain high-quality concrete with superior durability, strength, and excellent water tightness.

Dosage:

The recommended dosage of POLY 44 / 44 S / 44 W is between 1.0 – 2.0% by weight of the total binder content in the concrete mix design. The specified dosage may vary depending on the type of cement, aggregate properties, mineral additions, water content, and the required fresh and hardened concrete performance characteristics. The optimum dosage should be determined through laboratory trials based on the specific project requirements, and the final mix proportions should be established accordingly. When it is required, the Shva Co. technical support unit should be consulted.

Cleaning: POLY 44 / 44 S / 44 W admixture can be washed with fresh cold water and should not be allowed enter sewers or open bodies of water.

Method of Application: POLY 44 / 44 S / 44 W should be added to the mixing water or directly into the concrete mix during batching. It is recommended not to add the admixture to dry cement. Ensure adequate mixing time after addition to achieve uniform distribution throughout the concrete. For optimum performance, trial mixes are strongly recommended before large-scale production to verify workability, setting behavior, and strength development under specific project conditions.

Usage According to Weather Conditions:

- In winter months: POLY 44 W
- In summer months: POLY 44 S
- In transitional seasons: POLY 44

Standards:

- POLY 44: EN 934-2 Table 3.1-3.2
ASTM C 494 Type F
- POLY 44 S: EN 934-2 Table 11.1-11.2
ASTM C 494 Type G
- POLY 44 W: EN 934-2 Table 12
ASTM C 494 Type E

Compatibility:

POLY 44 / 44 S / 44 W admixture is compatible with other Shva Co. admixtures used in the same concrete mix. If more than one type of admixture will be used in the concrete mix, they must be dispensed to the concrete separately.

Precautions in Application:

- Do not exceed the recommended dosage without prior laboratory verification.
- Always perform trial mixes before full-scale production.
- Do not add directly to dry cement; ensure addition into mixing water or fresh concrete.
- Adjust dosage in case of changes in cement type, aggregate grading, mineral additions, or ambient temperature.
- Protect the product from frost and direct sunlight.
- Ensure proper mixing time to achieve homogeneous distribution.
- Compatibility with other admixtures must be tested before combined use.
- Use appropriate personal protective equipment during handling.



Packing: 25 kg plastic drum - 200 kg drum - 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.

