

# EPOCON SP 545 L

High Range Water Reducing Super Plasticizer Concrete Admixture



## DESCRIPTION

**EPOCON SP 545 L** is high range water reducing super plasticizer concrete admixture. It confers higher compressive strength to concrete by reducing water demand and greater workability by dispersing cement particles.

## CHARACTERISTICS

**EPOCON SP 545 L** is used for ready mix concrete and precast industry where high early compressive strength of the concrete is very important. It reduces mixing water. It promotes excellent dispersion of the particles in cement resulting in a major improvement of the workability. It does not cause segregation. Free of Cl ions. It can be used with all types of cement.

## USES

**EPOCON SP 545 L** is recommended for all cement types, in the following areas:

- Ready to use concrete
- Heavy prefabrication
- General reinforced concrete
- Pumped concrete
- Pre-stressed concrete

## ADVANTAGES

**Increased workability:** Reduces placing time, labour and equipment.

**High strength concrete:** Water reduction gives higher strengths without cement increase or workability loss

**High early strength:** Water reduction can double the early age strength.

**Reduced permeability:** Reduction of Water reduces porosity giving improved water impermeability.

**Surface finish:** Better dispersion of cement particles and increased cohesion minimizes segregation and bleeding and gives improved surface finish.

**Improved pumpability:** Line friction is reduced by increasing workability and cohesion.

**Chloride free:** Safe in reinforced concrete.

## TECHNICAL SPECIFICATION

Test Name	Average Result
Chemical Composition	Sulphonated Naphthalene modified
Form	Liquid
Colour	Dark Brown
Specific Gravity@20°C	1.200 ± 0.01
pH	7.0 ± 1.5
Chloride content (%)	< 0.12
Freeze harm	Complete Stir or agitate the container before use
Freeze temperature	0°C
Boiling point	100°C
Odor	Mild odor
Toxicity	None
Flammability	None
Clean-up	Water
Fumes during treatment	Slight
Environmental Hazards	None
Air Entrainment	Up to 2.0% depending on dosage rate and concrete proportioning.



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## APPLICATION PROCEDURE

Mix cement (and pozzolanic materials), sand, aggregate and 50-70% of mixing water until a homogeneous mixture is obtained. **EPOCON SP 545 L** is poured into the concrete mix after the addition of the first 50 – 70 %of the mixing water. It is important that the mixing period should be sufficiently extended for the complete dispersion throughout the mix. **EPOCON SP 545 L** is added to the remaining mixing water until required workability and homogeneous mixture are obtained. (It is recommended to extend the mixing period 4 minutes)

## COMPATIBILITY

**EPOCON SP 545 L** can be used in all types of Portland cement, sulfate resisting cement and supplementary cementitious materials. **EPOCON SP 545 L** should be dispensed directly into the mixer and should not be premixed with other admixtures. If other admixtures are to be used in concrete containing **EPOCON SP 545 L**, they must be dispensed separately.

## CONSUMPTION

**EPOCON SP 545 L** is used in a range of 0.4 to 2.0Kg per 100Kg of cementitious material weight (depending on climatic conditions, proportioning and other components of the concrete).

## REMARKS

Usage dosages stated here under were obtained in laboratory conditions; they may change depending on the characteristics of other components, ambient conditions and water/cement ratio. Therefore, it is recommended that designs and tests should be conducted at sites using preliminary mixture ratios.

## RELEVANT STANDARDS

**ASTM C 494 Type G, BS 5075 Part I, BS EN 934 part 2 (TS EN 934-2)**

## PACKING

IBC (1000 Ltr), Bulk

## SHELF LIFE

12 months from the date of manufacturing.

## STORAGE CONDITION

Store indoor at a temperature between +5°C to +45°C. If frozen agitate thoroughly before use. Protect from direct sunlight.

## SAFETY PRECAUTIONS

As with all construction chemical products, adequate precautions and care must be taken during usage and storage. Avoid direct contact with foodstuff, eyes, skin, and mouth. Keep away from children and animals. Any direct contact with skin, eyes, etc. should be washed thoroughly with clean running water and soap. Use proper safety wear, goggles, and mask, etc.

## TECHNICAL ASSISTANCE

**EPO GULF SPECIALITIES** technical department with its highly trained and qualified Chemicals Marketing Advisory team provides a complete service in the field. Please consult your nearest service/sales department for assistance. Field services where provided, do not constitute any supervisory responsibilities.

## NOTICE

The information given in this publication is based on present state of our knowledge. Any recommendations and suggestions are made without guarantee since the conditions and procedures are beyond our control. Buyers and users should make their own assessment of our product under their own conditions and for their own requirements.

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