

EPOCON SP 545 N

High Range Water Reducing Super Plasticizer Concrete Admixture



DESCRIPTION

EPOCON SP 545 N is a high range water reducing, early strength increasing super plasticizer concrete admixture. It can provide very high level of water reduction up to 25 to 30 % without loss of initial workability or to produce high quality concrete of reduced permeability with highly early strength

CHARACTERISTICS

EPOCON SP 545 N 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.

APPLICATIONS

EPOCON SP 545 N is used for ready mix concrete and precast industry where high early compressive strength of the concrete is very important. It reduces mixing water (w/c ratio in concrete structure). It promotes excellent dispersion of the particles in cement resulting in a major improvement of the workability. It provides good wetting of fine-coarse aggregates, cement and mineral additives. It can be used under all weather conditions. It does not cause segregation. Free of Cl ions. It can be used with all types of cement. Prolongation of workability time depends on cement type and ambient temperature.

USAGE

EPOCON SP 545 N is used as a plasticizer without any risks of segregation, for ready mix concrete and precast industry where high early strength is necessary. Mix cement (and pozzolanic materials), sand, aggregate and 50-70 % of mixing water are mixed until a homogeneous mixture obtained. **EPOCON SP 545 N** is added the remaining mixing water and mixed until a homogeneous mixture and the desired workability obtained.

COMPATIBILITY

EPOCON SP 545 N can be used in all types of Portland cement, sulfate resisting cement and supplementary cementitious materials. **EPOCON SP 545 N** should be dispensed directly into the mixer and should not be pre-mixed with other admixtures.

If other admixtures are to be used in concrete containing **EPOCON SP 545 N**, they must be dispensed separately.

TECHNICAL SPECIFICATION

Test Name	Average Result
Chemical Composition	Sulfonated naphthalene based
Form	Liquid (Homogeneous)
Colour	Dark Brown
Specific Gravity @20°C	1.220 ± 0.01
pH	7 ± 1.5
Chloride content (%)	< 0.1
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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CONSUMPTION

EPOCON SP 545 N is used in a range of 0.90 to 1.70 liters per 100 Kg of the 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 (F/G), BS 5075 Part I, BS EN 934 Part 2 (TS EN 934-2), (EN480-10)

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.

TECHNICAL INFORMATION

Typical Engineering Data: The following data using **EPOCON SP 545 N** was developed under laboratory conditions and according to ASTM C494/05 limits Type (F/G).

Mix Design:

Cement content (OPC) 307 Kg/M³

Coarse aggregate 62 %

Fine aggregate 38 %

Compressive Strength vs. Control

1 day - up to 140%

3 days - 130 - 150%

7 days - 120 - 140%

28 days - 120 - 130%

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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