

MARKPLAST SP-40

High Performance Superplasticiser for Cement Concrete and Mortars



DESCRIPTION

MARKPLAST SP-40 is a Superplasticiser with high strength properties based on Sulphonated Naphthalene Formaldehyde polymer. It is a liquid plasticizing admixture for cement and mortars. It has a powerful dispersing and deflocculating effect on the particles of cement. It makes the concrete flowable with an added advantage of high early and long term strength. It allows concrete to be easily compacted with minimum vibrations. It is specially designed for high strength concrete.

FEATURES / ADVANTAGES

- Specially Designed where High Strength Concrete is Required .
- It improves workability and easier handling.
- It does not contains chloride hence does not corrode reinforcement.
- It can be used even for fly ash and slag cement concrete.
- It retains the workability of concrete.
- It reduces shrinkage and permeability of hardened concrete.
- It eliminates formation of cold joints between subsequent pours in mass of structural concrete
- It increases the strength of concrete due to its water reduction property.

TYPICAL APPLICATIONS

- It is widely used in ready mix concrete
- It is particularly recommended for concreting in hot climates, long or difficult pours prestressed concrete in large sections or mass concreting.
- It is used more specifically in - Structural concrete, Bridge decks, highway concrete, Long distance transporting, precast concrete.

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TYPICAL PROPERTIES

- Color & appearance : Dark brown low viscous liquid
- Relative density at 25°C : 1.19 ± 0.02gms/cc
- PH Value : Min. 6

SPECIFICATION COMPLIES

- IS 9103, Superplasticiser Retarding type.
- BS: 5075 PART 3
- ASTM: C-494, Type-G

DIRECTIONS FOR USE

DOSAGE

Normal dosage range of MARKPLAST SP-40 is 0.8 to 2.1 % by weight over cementations materials including PFA, GGBFS and Micro silica/met kaolin. The optimum dosage to meet the specific requirement should always be determined by conducting trial mixes using the materials and conditions that will be experienced in use. Because of variations in job conditions, concrete materials and climatic conditions dosage rates may vary in such cases, contact our CC (Construction chemicals) representative.

EFFECTS OF OVERDOSAGE

An overdosing of **MARKPLAST SP-40** can result in the following.

- Delay of initial & final set of concrete.
- Increase in plastic shrinkage.
- Increase in air entrainment.
- Severe bleed & segregation of mix
- Due to slight overdosing of **MARKPLAST SP-40** the ultimate compressive strength of concrete cannot be get affected, providing it is properly compacted & cured. Due allowance should be made for the effect of fluid concrete pressure on formwork, & stripping time should be monitored.

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DIRECTION FOR USE

- Stir well the material before use.
- **MARKPLAST SP-40** is ready to use liquid which is dispensed in to the concrete together with the mixing water.
- The dispersion effect is higher if it is added to the damp concrete after 60 to 70% of mixing water has been added.
- Not recommended to add in dry aggregates and cement.

WORKABILITY

MARKPLAST SP-40 will retain the workability of concrete approx. up to 2 hrs. @25°C. It retains the workability of concrete in proportion to the amount of product dosage used for trials. The workability loss is dependent on factors such as temperature, type of cement, type of aggregate, the initial workability of mix and methods of transportation of concrete etc.

COMPATIBILITY

Compatible with all types of Portland cements, slag & pozzolans such as fly ash, Microsilica/ metakaolin. **MARKPLAST SP-40** is compatible with other water reducing admixtures, air entrainers, retarders, accelerators, corrosion inhibitors when added separately in to the mix.

PACKAGING

MARKPLAST SP-40 is supplied in 5, 50 and 250 kg drums or in bulk as per requirements.

STORAGE & SHELF LIFE

- Store the material in a cool & dry place. (Preferably at @30°C temp.) Store under cover, out of direct sunlight and protect it from extremes of temperatures.
- Shelf life is one year from the date of manufacturing when stored in undamaged, unopened, original sealed packaging.

HEALTH & SAFETY

- If it comes in contact with skin, mouth, eyes etc, wash it with plenty of water & if needed take medical advice. If accidentally gets ingested seek immediate medical attention. It is non toxic.

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- Do not reuse the containers for storage of consumable items for further information refers to the material safety data sheet. MSDS available on demand.