

# MARKPLAST HSP100

(PCE BASED HIGH PERFORMANCE SUPERPLASTICISER FOR CONCRETE)



## DESCRIPTION

**MARKPLAST HSP-100** is a polycarboxylic ether based Superplasticiser with very high water reduction capacity. It is mainly developed for meeting the criteria of self-compacting concrete with high early as well as long term strength at lower water cement ratio. The mechanism is based on steric hindrance effect. Due to the presence of side chains linked to the polymer backbone it generates steric hindrance effect which greatly stabilizes cement particle's capacity to separate and disperse. The specific configuration of PCE polymer allows its delayed absorption on to the cement particles & disperses them efficiently.

## FEATURES / ADVANTAGES

- It facilitates high early and long term strength gains with super slump retention property at very low water cement ratio also
- High level of fluidity that can be poured and placed by gravity avoiding the need of vibration
- Increased early and ultimate compressive strengths
- Increased flexural strength
- Lower permeability
- Increased durability
- Better resistance to aggressive atmospheric conditions
- Reduced shrinkage and creep
- It does not contain Chlorides hence does not corrode the reinforcements.
- Elimination of vibration and reduced the labor cost in placing by implementing self-compacting concrete

## APPLICATIONS

- Self Compaction / Self levelling Concrete
- Ready mix concrete
- Pumped concrete

- Long distance transportation
- Best suited in high rise building
- Very High strength concrete

## SPECIFICATION COMPILES

- ASTM C494 TYPE F

TYPICAL PROPERTIES	
Type	PolyCarboxylate Ether Based
Density	1.108 ± 0.02 gms/cc
Colour	Pale Yellow To Brown
Chloride	Nil
Water Reduction	> 18%
Air Content	< 0.6%

## APPLICATION DETAILS

**DOSAGE** : Normal dosage range of MARKPLAST HSP-100 is 0.3 to 1.4 % by weight. 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 CCR (Construction chemicals) representative (Construction chemicals representative).

## EFFECT OF OVERDOSAGE

An overdosing of MARKPLAST HSP-100 can result in the following.

- Delay of initial & final set of concrete.
- Increase in plastic shrinkage
- Severe bleed & segregation of mix
- Due to slight overdosing of MARKPLAST HSP100 the ultimate compressive strength of

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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. In such cases contact our CCR (Construction chemicals representative).

## DIRECTION FOR USE

- Stir well the material before use
- MARKPLAST HSP-100 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. Thorough mixing is essential
- Not recommended to add in dry aggregates and cement
- Mix the concrete thoroughly after the addition of MARKPLAST HSP-100

## WORKABILITY

- MARKPLAST HSP-100 will retain the workability of concrete approx. up to 3 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.
- It is recommended that concrete should be properly cured by adopting the suitable method of curing

## COMPATIBILITY

Compatible with all types of Portland cements, slag & pozzolans such as fly ash, Microsilica/

metakaolin etc. The product must not be used in conjunction with any other admixtures unless prior approval is received from CCPL Technical service Department.

## PACKAGING

50 Litre Can and 225 Litre Drums. Bulk Packing available specially on request

## SHELF LIFE

12 months in original unopened packaging. Minimum recommended storage temperature is (25°C).

## PRECAUTIONS

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs. Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Reseal containers after use. Use in well ventilated areas and avoid inhalation.

## DISCLAIMER

The above information and details herein are based on the tests conducted & experience on application and usage. The user is advised to carry out the test and take trials to satisfy on the suitability of the products and meeting his requirement considering the prevailing conditions prior to apply/ using it on larger area. As the conditions under which the products are used or transported are beyond our control. We would not hold ourselves responsible on its consequential nonperformance.



## MR MARK OVERSEAS

### REGISTERED OFFICE

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