

# MARKPLAST FLOW 110

(Concrete Admixture for extended workability and high range water reduction with hybrid polymer technology)



## DESCRIPTION

**MARKPLAST FLOW 110** is the super plasticiser based on latest generation polycarboxylic ether polymers, developed using hybrid polymerisation technology. The product has been primarily developed for all grade concrete where the extended workability and performance is required specially during when temperature is greater than 30°C. MARKPLAST FLOW 110 is free of chloride & low alkali. It is compatible with all types of cements.

## FEATURES / ADVANTAGES

- MARKPLAST FLOW 110 is extremely efficient, allowing the production of high workability concrete without excessive admixture dosage and at 'normal' water contents
- Elimination of vibration and reduced labour cost in placing
- Marked increase in early and ultimate strength with highest E modulus
- MARKPLAST FLOW 110 is especially suitable for where higher retention is required, as it has neutral setting time and high early age strength
- Improved adhesion to carbonation and other aggressive atmospheric conditions
- Lower permeability - increased durability
- Reduced shrinkage and creep

## APPLICATIONS

- Self Compaction / Self levelling Concrete
- Ready mix concrete
- Long distance transportation
- Best suited in high rise building
- Very High strength concrete
- Production of rheodynamic concrete
- PreCast and Pre-Stressed Concrete
- Concrete containing pozzolans such as MicroSilica, GGBFS, PFA including high volume fly ash concrete

## TYPICAL PROPERTIES

Type	PolyCarboxylate Ether Based
Density	1.08 ± 0.03 gms/cc at 25°C
Colour	Pale Yellow To Light Brown
Chloride	< 0.09%
pH	> 6
Air Content	< 0.43%

## APPLICATION DETAILS

**DOSAGE**: Normal dosage range of MARKPLAST FLOW 110 is 0.3% to 1.2% 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)

## EFFECT OF OVERDOSAGE

The effect of overdosing MARKPLAST FLOW 110 is a function of the degree of overdose. When producing high consistence concrete, overdosing will increase the level of consistence and may induce the onset of segregation. Depending on the extent of the overdose, an increase in setting time may also occur, especially in low ambient temperatures and/or when employing Sulfate-resisting Portland cements or cement replacement materials. Any situation where an overdose is suspected, careful inspection of the concrete in its plastic state should be conducted. Particular attention to consistency and cohesiveness prior to a decision on the suitability of the concrete for the particular application in question

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## WORKABILITY

MARKPLAST FLOW 110 will retain the workability of concrete approx. up to 2 hrs @27°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. Mainly over M-50 mixes MARKPLAST FLOW 110 can be used along with micro silica keeping the flow parameters tight (90 – 110 mm) for high initial and ultimate strength.

## 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

225 Kg Barrels. Bulk Packing available specially on request

## SPECIFICATION COMPILES

- ASTM C494 TYPE F/G
- IS 9103 : 1999
- IS 2645:2003

## 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

VIJAY NAGAR, NEAR NAMASTAY CHOWK, GT ROAD, KARNAL - 132001  
(HARYANA) INDIA MOB : +91 8860760000, 9215703333  
WEBSITE : [WWW.MARKCHEMCONSTRUCTION.COM](http://WWW.MARKCHEMCONSTRUCTION.COM)  
EMAIL : [INFO@MARKCHEMCONSTRUCTION.COM](mailto:INFO@MARKCHEMCONSTRUCTION.COM)