

## MULTIFLOW SUPER 704

### High Range Water Reducing Admixture (Superplasticiser) to Produce Flowable Concrete

#### Specification Types

ASTM-C494 Type A&F, B.S. 5075 Part 1, CRD C-87  
Type A, MSHTO M-194-70 Type A&F

#### Description

A liquid admixture comprising high molecular weight polymers and sulphonated naphthalene formaldehyde condensate. No chloride added. MULTIFLOW 704 whilst dramatically increasing the workability of concrete mixes by its powerful deflocculating and dispersing effect, also reacts catalytically to increase the rate of strength gain of the concrete.

#### Typical Applications

- \* For the production of flowable high quality concrete
- \* Enabling pre-cast products to be placed faster, also enabling de-moulding at an earlier age
- \* Where reduced striking times would be of benefit
- \* For road paving concrete to be opened to traffic at an earlier age
- \* Where high workability concrete coupled with high early strength is required.
- \* For production of a high early and ultimate design strength concrete

#### Advantages

- \* Aids pumped concrete by reducing line friction and "dry packing"
- \* Enables pre-cast concrete units to be de-moulded in 12 to 16 hours and substantially earlier for heat cured systems
- \* Enables production of high density, less permeable concrete
- \* Significant reductions in water content, between 15-20%, can be effected whilst maintaining concrete workability
- \* Enables high strength, high workability concrete to be produced at normal cement contents
- \* Can be used to produce virtually self-compacting, flowing concrete requiring minimal vibration
- \* Safe in pre-stressed concrete use.

#### Typical Properties

Colour:	Dark brown liquid/ black liquid
Specific Gravity:	1.19 at 20° C
Chloride Content:	No added Chloride
Freezing Point:	0° C - can be reconstituted if stirred after thawing
Storage Life:	Up to 1 year when stored in accordance with manufacturer's instruction

#### Directions for Use

MULTI FLOW 704 should be added to the mix during the mixing cycle at the same time as the water or aggregates. Never add MULTI FLOW 704 to the dry cement. No extension to the mixing time is necessary.

Alternatively, utilizing MULTIFLOW 704 to produce flowing concrete on site when using ready mix trucks, it can be added to the concrete via the feed hopper at the rear of the truck, a few minutes before placing.

Ensure at least 5 minutes mixing before use at minimum drum revolution of 10 rpm to produce a fully homogenous mix. When using MULTIFLOW 704 to obtain very high early strengths, advantage must be taken of its water reducing properties.

**Mix Proportions:** When using MULTIFLOW 704 to produce flowing concrete, it is essential for concrete mixes to be designed to accommodate an increase in concrete workability. A conventional pumped concrete mix design with a further addition of 2% to 3% fine sand will normally accommodate this, depending on overall fines content and sand grading. For water reduction or high early strength concrete, no adjustment to mix designs are necessary, apart from required water reduction to produce desired workability.

**Dosage:** Field trials should be conducted to determine the optimum addition rates of MULTIFLOW 704. As a guide, the following figures are recommended as a starting point:

Dosage rate: 800ml-1200ml / 100kg cement.

**Effects of Over-Dosage:** A severe over dosage of MULTIFLOW 704 will result in increase in workability-Increased slump. Providing the concrete is properly cured, the ultimate strength of the concrete will not be adversely affected and will be generally higher than for normal concrete. Care should be taken to allow for the effect of fluid concrete pressure on form work and stripping times should be monitored.

**Dispensing:** The measured quantity should be added directly to the mixer at the same time as the mixing water. MCC LIMPOPO will install a suitable dispenser to the batching plant/ mixer "free-on-loan".

**Compatibility:** MULTIFLOW 704 can be used with all types of Portland Cement, including Sulphate Resisting. For use with other special cements, contact MCC LIMPOPO. MULTIFLOW 704 should not be pre-mixed with other admixtures if other admixtures are to be used in concrete containing MULTIFLOW 704, they must be dispensed separately. Consult MCC LIMPOPO Field Representative.



Tel: 015 293 1459  
Fax: 015 293 0368

P.O. Box 465  
Ladanna, 0704

43 Staal Street  
Ladanna  
Polokwane 0704

## MULTIFLOW SUPER 704

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**Packaging:**

Available in 25 and 200 litre drums. Bulk deliveries are available on request. Protect from extreme temperature change.

**Quality Assurance:**

MCC LIMPOPO product and testing programmes comply to local testing standards. These stringent testing requirements also comply to ASTM C-494, B.S. 5075, MSHTO M-194 and CRD-C87 performance specifications for concrete admixtures.