

MULTIFLOW 600

Plasticizing and Water Reducing Concrete Admixture with Moderate Set Retarding Properties

Specification Types

ASTM C494 Types B&D; CRD-C87 Types B&D, BS 5075.
Part I

Description: MULTIFLOW 600 RETARDING integral liquid admixture for concrete combines a powerful plasticizer, which disperses and deflocculates cement particles, together with chemicals that retard the initial and final set of the concrete. It can be used to improve workability, without the addition of extra water, or to allow reduction in free water content. Due to the improved dispersion of the cement particles, the process of hydration proceeds under the most favourable conditions.

Typical Applications: In hot weather concreting where delays to initial and final set is of primary importance. To enable continuous pours to be affected ensuring monolithic construction.

Advantages:

*Improves the cohesive properties of concrete helping to reduce segregation and bleeding. Of particular value with crushed rock aggregates

*Enables concreting to proceed with minimal problems in hot weather conditions

*Improves workability therefore easing placing

and improving both the plastic and hardened properties of all types of concrete mixes

*Extends the time concrete is responsive to vibration, therefore helping to eliminate cold joints and honeycombing

*Improves surface finish

Action: MULTIFLOW 600 RETARDING influences the rate of formation of the coagulation structures and the speed and form of the crystallization of the aluminate hydration process. The product is absorbed onto the surface of the cement grains retarding their hydration and, because of its hydrophilic nature, increases the stability of the suspension, delaying formation of the coagulation network and decreasing the initial plastic viscosity.

Typical Properties

Colour:	Dark brown liquid/ black liquid 1.19 at 20° C
Specific Gravity: Air	1 - 2% dependent on grading of sand and water content
Entrapment:	No added chlorides
Chloride Content:	Nil
Nitrate Content:	0°C - can be reconstituted if stirred after thawing
Freezing Point:	Up to 1 year when stored in accordance with manufacturer's instructions.
Storage Life:	None
Flashpoint:	None

A liquid admixture that contains no added chlorides or nitrates and is classified as a Polyhydroxylated Carboxylic Acid Derivative, but contains additional chemicals to delay the setting time of cement without prejudice to the strength at 7 and 28 days.

Directions for Use: MULTIFLOW 600 RETARDING should be added to the concrete mix at the same time as the water during the mixing cycle. Never add MULTIFLOW 600 RETARDING to the dry cement powder. No extension to normal mixing times is necessary.

Dosage: Field trials should be conducted to determine the optimum dosage rates of MULTIFLOW 600 RETARDING. As a guide to these trials, a dosage range of 250ml to 500ml per 100kg cement is recommended. Dependent on the desired properties, a dosage up to 750ml per 100kg cement can be used.

Effect of Over-dosage: A severe over-dosage of MULTIFLOW 600 RETARDING will result in the following:

- * Extended retardation of initial and final set
- * Slight increase in air entrainment
- * Increased workability

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Providing concrete is properly cured, the ultimate strength of the concrete will not be adversely affected and will generally be higher than for normal concrete. It is likely that the stripping times of formwork will be affected.

Compatibility: MULTI FLOW 600 RETARDING can be used with all types of Portland Cement including Sulphate Resisting. MULTIFLOW 600 RETARDING should not be pre-mixed with other admixtures! If other admixtures are to be used in the concrete they must be dispensed separately. Consult MCC LIMPOPO Technical Office or Representative for advice.

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".

Packaging: MULTIFLOW 600 RETARDING is available in 25 and 200 litre drums. Protect from extreme temperature changes when storing drums.

Specification Clause: Where indicated, all concrete shall be dosed with MULTIFLOW 600 RETARDING, the high performance set retarding plasticizer manufactured by MCC LIMPOPO

Complying to Specification Type: ASTM C494: Types B&D, BS 5075 Part 1, CRD-C87: Types B&D

Composition: A Polyhydroxylated Carboic Acid Derivative that contains additional chemicals to delay the setting time of cement. MULTI FLOW 600 RETARDING shall be used at a dosage rate within the range of 250 to 500ml per 100kg of cement in accordance with the manufacturer's recommendations.

Curing: It is essential to cure all concrete in order to achieve design strength and reduce moisture loss. Cure with MULTICURE Curing Compounds.

Quality Assurance

MCC LIMPOPO production and testing programmes comply with local testing standards. These stringent testing requirements also comply to ASTM C494, Bs5075. Part 1 and CRD-C87 performance specifications for concrete mixtures.

Updates: This data sheet supersedes all previous issues prior to this date: 31/05/97.