

## TECHNICAL DATA SHEET

MULTIFLOW 511 - Water Reducing and Set Controlling Admixture

PAS-TDS-ADM-001

### Specification Types

Meets and exceeds ASTM C 494 Type A, B.S. 5075 part 1, AASHTO M-194 and CRD-C87 specifications for concrete admixture.

### Description

MULTIFLOW 511 is a Chloride free water reducing admixture that has been specially formulated to obtain optimum performance with the current range of local cements, sands and coarse aggregates used for producing concrete,

MULTIFLOW 511 consists of selected sugar-reduced Lignosulphonates and other proprietary chemicals to facilitate water reducing and set controlling properties.

### Typical Applications | Advantages

**Chloride Free:** Formulated for use where chloride constraints exist such as pre-stressed concrete. MULTIFLOW 511 is compatible With Sulphate Resisting Cements and marine aggregates.

**Improved Workability:** Improves finish-ability and workability at a given slump for easier and quicker placing and compaction without decreasing strengths.

**Increased Strengths:** Higher compressive, flexural and bond strengths of Concrete are achieved Without increasing the cement content resulting from the reduced water content.

**Reduced Permeability:** The lower water \ cement ratio produces a denser concrete with improved water tightness i.e. for water retaining structures

**Reduced Segregation:** MULTIFLOW 511 produces a high qualify cohesive concrete with reduced cracking, segregation and bleeding in the plastic State

**Economic:** When concrete is proportioned to strength and performance specifications the cement content is reduced or maintained at a given workability and/or increased workability resulting in a more economical concrete.

**Durability:** MULTIFLOW 511 produces a consistent and uniform high-quality concrete with increased durability and greater resistance to attack by aggressive agents.

### Admixture Mechanism

When added to concrete mixes. MULTIFLOW 511 reacts with the cement to produce a highly dispersed cement phase resulting in greater cement efficiency which improves workability through the reduction Of water at a given slump. The reduction in water Improves the cement water ratio and In turn, increases the compressive and flexural strengths.

### Typical Properties

|                   |                                                                              |
|-------------------|------------------------------------------------------------------------------|
| Colour:           | Dark brown liquid / black liquid                                             |
| Air Entrapment:   | Typically less than 2% additional air is entrained at normal dosages         |
| Chloride Content: | No added chlorides                                                           |
| Nitrate content:  | Nil                                                                          |
| Specific Gravity: | Typically 1.19at2g•c                                                         |
| Freezing Point:   | O'C -can be reconstituted if stirred after thawing                           |
| Flashpoint:       | None                                                                         |
| Storage Life:     | up to 1 year when stored in accordance with the manufacturer's instructions. |

MULTIFLOW 511 is compatible with all other MULTIFLOW admixtures and air-entraining agents. When used in conjunction with another admixture, each admixture must be dispensed separately into the mix. Can be used with all types of cements, cement / slag cement / PFA combinations.

**Directions for use;** MULTIFLOW 511 should be added to the concrete at the same time as the mixing water during the mix cycle. Never add MULTIFLOW 511 to dry cement. No extension to normal mixing times is necessary.

**Dosage:** MULTIFLOW 511 is used at a rate of 250ml to 420ml per 100kg of cement. To determine suitable and optimum dosage rates, site evaluations should be carried out with the recommended aggregates, cements, water and site batching conditions.



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### Effects of Over Dosage

A severe over-dosage of MULTIFLOW 511 Will result in the following:

- Retardation of Initial and Final Set
- Major increase in workability with possibility of segregation

### Dispensing

The measured quantity should be added directly to the mixer at the same time as the mixing water. Contact Pasiffire SD Projects (Pty) Ltd regarding suitable dispensing equipment for the batching plant/mixer.

### Packaging

MULTIFLOW 511 is supplied in 25 and 200 litre drums, Bulk deliveries are available on request. MULTIFLOW 511 must be protected from extreme temperature changes, store between 2°C and 55°C. If these conditions are exceeded, agitate until completely reconstituted.

### 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

Pasiffire SD Projects (Pty) Ltd production and testing programmes comply with local testing standards. These stringent testing requirements must also comply with ASTM CA94, B.S 5075, AASHTO M-194 and CR5D-C87 performance specifications for concrete admixtures.

Updates This data sheet supersedes all previous issues prior to this date: 30/11/95.

The information contained herein is based on our current knowledge and experience. It is the user's responsibility to ensure that the product is suitable for the intended application. Pasiffire SD Projects (Pty) Ltd reserves the right to change product specifications without prior notice.

**FOR PROFESSIONAL USE ONLY**

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