

# MasterPozzolith<sup>®</sup> 55R

## Plasticising and water reducing admixture with set retarding properties

### MATERIAL DESCRIPTION

**MasterPozzolith 55R** is a powerful plasticiser which disperses and deflocculates cement particles whilst delaying the hydration process, thereby retarding the initial and final set. It can be used to improve workability without the addition of extra water, or to allow reductions in the free water content. Due to improved dispersion of the cement particles the process of hydration proceeds under the optimum conditions, leading to improved strength characteristics with or without reduction in free water.

### TYPICAL APPLICATION

High strength, high cement content, low W/C ratio mixes. Hot weather concrete where control of initial and final set is important.

White cement concrete.

Retarded mortars (in combination with **MasterCast 910**).

Slip formed concrete, high strength mixes, to control set of concrete particularly in high temperature conditions, bridge building, pre-stressed concrete work, and mass concrete.

### ADVANTAGES

Increases compressive, tensile and flexural strength of concrete

Increases density of concrete reducing permeability and thus increasing durability

Allows a reduction in free water in the region of 8-12%

Highly effective in high cement content low water cement ratio mixes where its use enables concrete to be made more workable without loss in strength, density and durability

Enables controlled extension of initial set

The retarding action allows continuous concrete pours to be made, thus reducing the number of construction joints needed

The strength gain of concrete containing **MasterPozzolith 55R** is enhanced. After retardation of initial and final set, a more rapid hardening of the concrete occurs, and the effect on stripping time is negligible

### PACKAGING

**MasterPozzolith 55R** is available in bulk or 210 L drums.

### APPLICATION GUIDELINES

**MasterPozzolith 55R** should be added to the concrete mix during the mixing cycle, at the same time as the water, or the aggregates. Never add **MasterPozzolith 55R** to the dry cement. No extension to normal mixing time is necessary.

Field trials should be conducted to determine the optimum addition rates of **MasterPozzolith 55R**. As a guide to these trials, a dosage range of 100 to 250 ml per 100 kg of cementitious material for normal use and 250 to 500 ml where higher retardation is required. Dosages outside this range can be used where improved workability, increased water reduction and / or further set retardation are required.

### Effects of over dosage

A severe over dosage of **MasterPozzolith 55R** will result in:

Increased retardation of initial and final set.

Increase in workability.

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. Care should be taken to allow for the affect on formwork pressures and on stripping times.

### TYPICAL PROPERTIES

Properties listed are for guidance and are not a guarantee of performance.

Colour	Clear to light brown liquid
Specific gravity @ 25°C	1.156
Chloride content	"chloride free" to EN 934
Freezing point	0°C

### COMPOSITION

A blend of specially selected surface active agents and refined lignosulphonates.

### STANDARD

EN 934-2 Tables 6 and 10

ASTM C494: Type B & D

BS 5075: Part 1 (superseded by EN 934-2)

### MIXING

**MasterPozzolith 55R** can be used with all types of Portland cement including sulphate resisting (Type V). For use with other special cements, contact Master Builders Solutions Technical Department.

**MasterPozzolith 55R** should not be premixed with other admixtures. If other admixtures are to be used in concrete containing

**MasterPozzolith 55R**, they must be dispensed separately. If in doubt, consult Master Builders Solutions Technical Department.

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**MasterPozzolith 55R** should be dispensed through a proprietary dispenser, such as is available from Master Builders Solutions

### SAFETY PRECAUTIONS

Avoid contact with eyes and prolonged contact with skin. During application, always wear gloves and appropriate clothing to minimise contact. In case of contact with eyes, immediately flush with plenty of water for at least 15 minutes. Should skin contact occur, wash immediately with soap and water. Seek the advice of a physician should symptoms persist.

### STORAGE

**MasterPozzolith 55R** should be stored in unopened original packing. Store under cover, out of direct sunlight and protect from extremes of temperature. The shelf life is 12 months when stored as above.

Failure to comply with the recommended storage conditions may result in premature deterioration of the

product or packaging. For specific storage advice consult Master Builders Solutions Technical Services Department.

### NOTE

Field service, where provided, does not constitute supervisory responsibility. For additional information contact your local MBS representative.

MBS reserves the right to have the true cause of any difficulty determined by accepted test methods.

\* Properties listed are based on laboratory controlled tests.

® = Registered trademark of the MBCC-Group in many countries.

### QUALITY AND RESPONSIBLE CARE

All products originating from MB Construction Chemicals Solutions are manufactured under a management system independently certified to conform to the requirements of the quality standards ISO 9001, environmental and occupational health and safety standards.

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### DISCLAIMER

The technical information and application advice given in this MB Construction Chemicals Solutions Kenya Ltd publication are based on the present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use.

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