

MasterPozzolith® 55R

Plasticising and water reducing admixture with set retarding properties

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 APPLICATIONS

- 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.

STANDARDS

EN 934-2 Tables 6 and 10
 ASTM C494: Type B & D
 BS 5075: Part 1 (superseded by EN 934-2)

TYPICAL PROPERTIES*

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

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.

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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.

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

STORAGE AND SHELF LIFE

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.

HEALTH AND SAFETY

MasterPozzolith 55R is not a fire or health hazard. Spillages should be washed down immediately with cold water. For further information refer to the Material Safety Data Sheet.

QUALITY AND CARE

All products originating from Master Builders Solutions Dubai, UAE facility are manufactured under a management system independently certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001 and ISO 14001.

* Properties listed are based on laboratory controlled tests.

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STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this Master Builders Solutions 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.

NOTE

Field service where provided does not constitute supervisory responsibility. Suggestions made by Master Builders Solutions either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not Master Builders Solutions, are responsible for carrying out procedures appropriate to a specific application.

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