

MasterRheobuild 1100

A high range water reducing superplasticising admixture for the production of rheoplastic concrete

MATERIAL DESCRIPTION

The basic components of **MasterRheobuild 1100** are synthetic polymers which allow mixing water to be reduced considerably and concrete strength to be enhanced significantly, particularly at early ages. **MasterRheobuild 1100** is a chloride free product.

TYPICAL APPLICATIONS

- Precast concrete.
- Low water/cement ratio concrete.
- In complicated formwork or with congested reinforcement.

ADVANTAGES

MasterRheobuild 1100 allows the production of very flowable concrete, with a low water / cement ratio. Concrete with **MasterRheobuild 1100** shows strengths higher than concrete without admixture having the same workability. The increase in strength, especially evident at early ages remains at later ages, both in air cured and steam cured processes. Initial and final sets do not change significantly with respect to concrete without admixture.

Due to the reduction in the water / cement ratio, all other properties of hardened concrete improve significantly, namely, lowered permeability, shrinkage and creep, increased workability, and modulus of elasticity.

For more detailed information on the influence of superplasticisers on hardened concrete properties, consult your local Master Builders Solutions representative.

PACKAGING

MasterRheobuild 1100 is available in 210 litre drums or 1000 litre IBCs or in bulk.

STANDARDS

EN 934-2 Tables 3.1 and 3.2
ASTM C-494 Types A and F
BS 5075 Part 1 & 3 (superseded by EN 934-2)

TYPICAL PROPERTIES*

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

Colour	Dark brown liquid
Specific gravity @ 25°C	1.210
Chloride Content	"chloride-free" to EN 934
Freezing Point	0°C

APPLICATION GUIDELINES

MasterRheobuild 1100 should be added to the mix with the gauging water.

No extension to the mixing time is necessary. Never add **MasterRheobuild 1100** to dry cement.

Alternatively, when using **MasterRheobuild 1100** to produce flowing concrete at site using ready-mix trucks, it can be added to the concrete via the feed hopper at the rear of the truck. Mix before discharge for 3 minutes at 10rpm to produce a fully homogenous mix.

When using **MasterRheobuild 1100** to obtain very high early strengths, advantage must be taken of its water reducing properties.

DOSAGE

MasterRheobuild 1100 is normally dispensed at a rate of 0.8-1.5 L/100kg of cement. Subject to successful trials, other dosages may be used up to a rate of 3 L/100kg of cementitious material.

EFFECTS OF OVER DOSAGE

A severe over-dosage of **MasterRheobuild 1100** will result in the following:

- Retardation of initial and final set.
- Slight increase in air entrainment.
- Increase in workability.

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DISPENSING

MasterRheobuild 1100 is introduced into the mixer together with mixing water. The plasticising effect or water reduction is higher if the admixture is added to the concrete after 50-70% of the mixing water has been added. The addition of **MasterRheobuild 1100** to dry aggregate or cement is not recommended.

MIXING

MasterRheobuild 1100 is compatible with all cements and admixtures meeting ASTM standards.

The use of **MasterRheobuild 1100** and **MasterAir 100**, air-entraining agent is recommended whenever concrete is required to withstand freeze / thaw cycling.

STORAGE AND SHELF LIFE

Store under cover, out of direct sunlight and protect from extremes of temperature. 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

MasterRheobuild 1100 contains no hazardous substances requiring labelling. For further information refer to the material safety data sheet.

NOTE

Technical support, where provided, does not constitute supervisory responsibility. For additional information contact your local MB Construction Chemicals Solutions South Africa (Pty) Ltd representative. MB Construction Chemicals Solutions South Africa (Pty) Ltd shall not be liable for technical advice provided.

MB Construction Chemicals Solutions South Africa (Pty) Ltd reserves the right to have the true cause of any difficulty determined by accepted test methods. Undertaking such tests is not, and shall not be deemed to be, an admission of liability or an assumption of any risk, loss, damage or liability.

QUALITY AND RESPONSIBLE CARE

All products originating from MB Construction Chemicals Solutions South Africa (Pty) Ltd 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.

* Properties listed are based on laboratory controlled tests.

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