

MasterRheobuild[®] 1SP

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

DESCRIPTION

MasterRheobuild 1SP is a liquid admixture for concrete based on sulphonated naphthalene. The product may be used to effect substantial water reductions or to produce rheoplastic concrete with normal setting times.

PRIMARY USES

- Production of rheoplastic self compacting concrete.
- Precast concrete.
- Low water/cement ratio concrete.
- In complicated formwork or with congested reinforcement.

ADVANTAGES

- Powerful plasticising action reduces or eliminates the need for compaction
- Concretes of similar workability can be produced with 20-30% less water
- Increased compressive, tensile and flexural strength can be achieved as a benefit of its water reducing properties
- High early strengths can significantly increase mould utilisation in precast works

COMPATIBILITY

MasterRheobuild 1SP can be used with all types of Portland cement, including Sulphate Resisting. For use with other special cements, contact Master Builders Solutions Construction Chemicals Technical Services Department.

MasterRheobuild 1SP should not be premixed with other admixtures. If other admixtures are to be used they must be dispensed separately.

PACKAGING

MasterRheobuild 1SP is available in bulk or in 210 litre drums.

STANDARDS

EN 934-2 Tables 3.1 and 3.2
 Complies with ASTM C494 Type A & F
 BS 5075 Part 1 Appendix D (superseded by EN 934-2)

TYPICAL PROPERTIES*

Colour	Dark brown liquid
Specific gravity	1.160 at 25°C
Chloride content	“chloride-free” to EN 934
Freezing point	0° C

APPLICATION GUIDELINES

MasterRheobuild 1SP should be added to the mix with the gauging water.

No extension to the mixing time is necessary. Never add **MasterRheobuild 1SP** to dry cement.

When using **MasterRheobuild 1SP** 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 5 minutes at 10rpm to produce a fully homogenous mix.

It is beneficial to evaluate **MasterRheobuild 1SP** by field trials, but as a general guide, to produce rheoplastic concrete, an addition rate of 600ml per 100kg of cement is usually sufficient to give the desired result. However, up to three times this amount may be required depending on mix design.

Dosage rates will increase in low w/c ratio concrete and concrete where temperatures are high.

To utilise the water reducing properties, a dosage of between 600 and 2000ml / 100kg of cement may be added.

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EFFECTS OF OVER DOSAGE

A severe over-dosage of **MasterRheobuild 1SP** will result in the following:

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

Providing it is properly cured, the ultimate strength of the concrete will not be adversely affected and will generally be higher than for normal concrete. Due allowance should be made for the effect of fluid concrete pressure on formwork, and stripping times should be monitored.

DISPENSING

MasterRheobuild 1SP 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 1SP** to dry aggregate or cement is not recommended.

STORAGE AND SHELF LIFE

Shelf life is up to 2 years in unopened original packing, protected from extremes of heat and cold and stored under shade.

HEALTH AND SAFETY

MasterRheobuild 1SP 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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