

RHEOBUILD® SP1

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

Description

RHEOBUILD® SP1 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

RHEOBUILD® SP1 can be used with all types of Portland cement, including Sulphate Resisting. For use with other special cements, contact BASF Construction Chemicals Technical Services Dept.

RHEOBUILD® SP1 should not be premixed with other admixtures. If other admixtures are to be used they must be dispensed separately.

Packaging

RHEOBUILD® SP1 is available in bulk or in 210 litre drums.

*Typical properties

Colour	Dark brown liquid
Specific gravity	1.160 at 25°C
Chloride content	"chloride-free" to EN 934-2
Freezing point	0° C

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BS 5075 Part 1 Appendix D (superseded by EN 934-2)

Dosage rate

It is beneficial to evaluate RHEOBUILD® SP1 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.

RHEOBUILD[®] SP1

Directions for use

RHEOBUILD[®] SP1 should be added to the mix with the gauging water.

No extension to the mixing time is necessary. Never add RHEOBUILD[®] SP1 to dry cement.

When using RHEOBUILD[®] SP1 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.

Effects of over dosage

A severe over-dosage of RHEOBUILD[®] SP1 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

RHEOBUILD[®] SP1 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

RHEOBUILD[®] SP1 to dry aggregate or cement is not recommended.

Storage

Up to 2 years in unopened original packing, protected from extremes of heat and cold and stored under shade.

Safety precautions

RHEOBUILD[®] SP1 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.

Note

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

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

Quality and care

All products originating from BASF's 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, ISO 14001 and OHSAS 18001.

05/95 BASF_CC-UAE revised 04/2008

* Properties listed are based on laboratory controlled tests.

Whilst any information contained herein is true, accurate and represents our best knowledge and experience, no warranty is given or implied with any recommendations made by us, our representatives or distributors, as the conditions of use and the competence of any labour involved in the application are beyond our control.

As all BASF technical datasheets are updated on a regular basis it is the user's responsibility to obtain the most recent issue.