RHEOBUILD® SP1

Replaces (Atroment 500)

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 Degussa Iran 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 220 kg. drums and 1100kg. containers.

Typical properties*

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

Colour	Dark brown/black liquid
Specific gravity	1.165 – 1.175 at 25°C
Air entrainment	Maximum 1%
Chloride content	Nil to BS 5075 : 1982
Nitrate content	Nil
Freezing point	0° C. Can be reconstituted if stirred after thawing.

Standards

Complies with ASTM C494 Type A & F
BS 5075 Part 1 Appendix D

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.

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 1 year 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 Degussa representative.

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

Quality

All products produced by Degussa certified manufacturing facilities, are produced to conform to systems designed to meet internationally recognised quality standards.

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