

# RHEOBUILD 851

## High range, water reducing superplasticiser for rheoplastic concretes

### Description

RHEOBUILD 851 is formulated from synthetic polymers specially designed to impart rheoplastic qualities to concrete. A rheoplastic concrete is a fluid concrete with a slump of at least 200mm, easily flowing, but at the same time free from segregation and having the same water/cement ratio as that of a low slump concrete (25 mm) without admixture. RHEOBUILD 851 is chloride free.

### Advantages

RHEOBUILD 851 considerably improves the properties of fresh and hardened concrete.

### Primary uses

- Microsilica concrete
- Mass concrete pours
- Ready mixed concrete
- Long-distance transport
- Pumped concrete
- Casting in hot climates

To obtain:

- Reduced thermal peaks
- High workability for longer periods
- Lower pumping pressure
- Delayed setting with longer workability
- Higher ultimate strengths.
- Reduced permeability
- Improved durability

### Compatibility

RHEOBUILD 851 is compatible with all cements and most air entraining agents meeting the ASTM standards. The addition of RHEOBUILD 851 and MICRO-AIR 100 (air entraining agent) to concrete is recommended where it is required to withstand freezing and thawing cycles.

### Packaging

RHEOBUILD 851 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:	Brown liquid
Specific gravity:	1.19 to 1.21 at 25°C
Chloride content:	Nil to BS 5075 Part 1
Freezing point:	0°C
Flashpoint:	N/A

### Standards

ASTM C-494 Type A, B, D, and G

### Dosage

Optimum dosage of RHEOBUILD 851 should be determined in trial mixes. As a guide the following dosages are recommended as a starting point for any trial. In normal concrete a dosage of between 0.8% and 2%. In high performance micro silica concrete a dosage of between 1.5 and 3%. Dependant upon mix requirement, it is possible to use a higher dosage of RHEOBUILD 851 without causing any adverse effects upon the concrete. Please consult Iranian Degussa Construction Chemicals Technical staff for further information.

## Dispensing

RHEOBUILD 851 is a ready-to-use liquid which is dispensed into the concrete together with the mixing water. The plasticising effect and water reduction are higher if the admixture is added to the concrete after 50 to 70% of the mixing water has been added. The addition of RHEOBUILD 851 to dry aggregate or cement is not recommended. Automatic dispensers are available.

## Workability

RHEOBUILD 851 ensures that rheoplastic concrete remains workable in excess 3 hours at +20°C. Workability loss is dependent on temperature, and on the type of cement, the nature of aggregates, the method of transport and initial workability. It is strongly recommended that concrete should be properly cured particularly in hot and dry climates.

## Storage

RHEOBUILD 851 must be stored where temperatures do not drop below +5°C. If product has frozen thaw and agitate until completely reconstituted. Store under cover, out of direct sunlight and protect from extremes of temperature.

Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice consult Degussa's Technical Services Department.

## Safety precautions

RHEOBUILD 851 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.

04/2006 Degussa-IR