

RHEOBUILD[®] 561

High-range water reducing superplasticising admixture

DESCRIPTION

RHEOBUILD 561 is a superplasticising, high range, water reducing admixture formulated to produce low slump loss rheoplastic concrete.

Rheoplastic concrete is fluid concrete with a slump value 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 no-slump concrete (25mm) without additive. The slump-retention characteristics of rheoplastic concrete permit the addition of **RHEOBUILD 561** admixture at the batch plant.

This ready-to-use chloride free liquid admixture meets ASTM C 494 requirements for Type G admixtures, AS 1478 type WRRc.

RECOMMENDED FOR

- all types of premix concrete where high water reduction or flowing properties are required.
- mass concrete pours
- long distance transport
- pumped concrete
- concrete in hot climates

RHEOBUILD 561 has been used successfully in:

- foundation slabs of thermal and nuclear power plants, turbo-generators, rolling mills, dry docks
- central batch plants for concrete to be transported for more than 1 hour
- concrete to be pumped over a distance of more than 200 metres or to a considerable height
- reinforced concrete and prestressed concrete structures in countries where temperature normally exceeds 40°C and relative humidity is low.

FEATURES AND BENEFITS

RHEOBUILD 561 considerably improves the properties of fresh and hardened concrete, providing:

- **minimum thermal peaks**
- **high flowability of the concrete for longer periods**
- **easy pumping**
- **delayed setting and longer workability**
- **high reliability**
- **high early and ultimate strengths**
- **impermeability**
- **durability**
- **cohesive and non-segregating**
- **low shrinkage and creep**
- **high elastic modulus**

PERFORMANCE - As a Superplasticiser

Aggregate maximum size = 20mm.
Cementitious Content = 350kg/m³
Initial slump = 40mm
Temperature = 23°C

WORKABILITY (Slump Retention)

RHEOBUILD 561 ensures that the rheoplastic concrete remains workable for about 3 hours at 20°C and for 1 hour at 40°C. The workability loss depends not only on temperature, but also on the type of cement, the nature of aggregates and the method of transport. It is strongly recommended that concrete should be properly cured particularly in hot and dry climates.

Performance:

Example of the influence of **RHEOBUILD 561** on the duration of workability at 25°C and 42°C.

Concrete control specimen:
Slump = 120mm; w/c = 0.60

Concrete with **RHEOBUILD 561** at 0.85 litres per 100kg dosage rate:
Slump = 220mm; w/c = 0.47

Maximum size of aggregate = 20mm
Cement Content = 350kg/m³
Type of cement = A.C.S.E.

DOSAGE

RHEOBUILD 561 is normally dosed at 800 ± 200mls per 100kg of cementitious material. Other dosages may be used depending on the mix design of the concrete and ambient conditions. The actual dose depends on the degree of water reduction or flow required.

DISPENSING

RHEOBUILD 561 is introduced into the mixer at the end of the batching sequence. The plasticising effect or water reduction is higher if the admixture is added to the damp concrete after 75% of the mixing water has been added. The addition of **RHEOBUILD 561** to dry aggregate or cement is not recommended, as it lowers the plasticising effect or the water reduction.

COMPATIBILITY

RHEOBUILD 561 is compatible with both water reducers and air-entraining agents approved under SAA, SANZ and ASTM specifications when used in concrete, but must be dispensed separately into the concrete mix. Should only be used in conjunction with water-reducing admixtures after specific test information is available at the dose rates proposed, otherwise extended retardation could result.



The Chemical Company

RHEOBUILD® 561

PACKAGING

RHEOBUILD 561 is supplied in 205 litre sealed drums and bulk delivery.

For additional information on RHEOBUILD 561 and its use in developing a concrete mix with special performance characteristics, contact your local BASF Construction Chemicals Technical Sales Representative.

PRECAUTIONS

For the full health and safety hazard information and how to safely handle and use this product, please make sure that you obtain a copy of the BASF Material Safety Data Sheet (MSDS) from our office or our website.

ARb561/8/0811

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