

MasterRheobuild® 561

A superplasticising admixture to produce low slump loss rheoplastic concrete

DESCRIPTION

MasterRheobuild 561 is a chloride free, ready-to-use, liquid admixture comprising of synthetic polymers specially designed to impart low slump rheoplastic qualities to concrete. Rheoplastic concrete is a 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 without additive.

MasterRheobuild 561 has been formulated to meet the requirements of ASTM C494 Type B, D and G, BS5075 Part 3 and UNI no. 7102, 7104 - 72 and 8145 for high range water-reducing admixtures. It is compatible with all cements meeting recognised international standards.

RECOMMENDED USES

- mass-concrete
- ready-mixed concrete
- long distance transport
- pumped concrete
- hot weather concreting
- use with all cements and air-entraining admixtures approved under ASTM, AASHTO, CRD & BSI.

It has been used for:

- foundation rafts of nuclear power stations, turbo-generators, rolling mills, shipyards and high rise buildings
- transporting of concrete lasting more than one hour casting structures where concrete is pumped over a distance of more than 200metres or to a considerable height
- reinforced concrete and prestressed concrete structures in regions where temperatures normally exceed 40°C and relative humidity is low.

FEATURES AND BENEFITS

- **Very high workability** - Short placement time. Saves time and labour.
- **High water reduction** - High impermeability and strength. Improves durability.

Compatibility

MasterRheobuild 561 is compatible with both water reducers and air entraining agents approved under ASTM specifications but it should be dispensed separately into the concrete mix. It

- **Superior cohesion** - No segregation even at high workability. Excellent concrete quality.
- **Low shrinkage and creep** - Better dimensional stability.

TYPICAL PERFORMANCE DATA

Pot Life and Workability: **MasterRheobuild 561** ensures that the rheoplastic concrete remains workable for up to 3 hours at 20°C and 1 hour at 40°C. The workability loss depends not only on temperature, but also on the type of cement, the nature of the aggregates and the method of transportation.

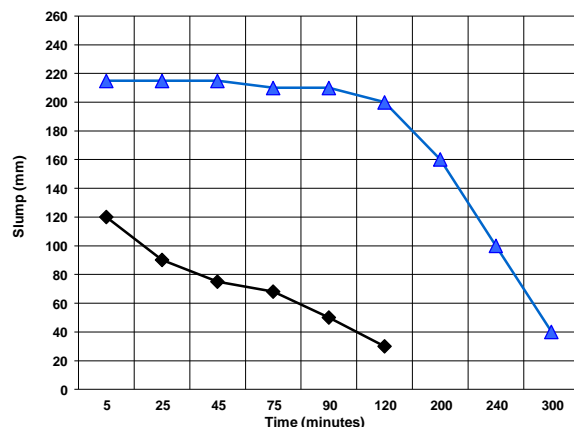
Rate of hardening

Example of the influence of **MasterRheobuild 561**

Maximum size of aggregates = 30 mm

Cement content = 350 kg/m³

Type of cement = Portland 325



—◆— concrete control specimen: slump=120 mm w/c=0.60

—▲— concrete with MasterRheobuild 561: 0.85L/100kg; slump=220mm; w/c=0.47

Setting time is influenced by the chemical and physical composition of the basic ingredients of the concrete, temperature of the concrete and climate conditions. Trial mixes should be made with job materials to determine the optimum dosage required for a specified setting time and a given strength requirement.

should only be used with water reducers after specific testing at the proposed dose rates, as certain combinations of dosages can result in extended retardation.

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APPLICATION

MasterRheobuild 561 provides optimal benefits when all materials have been batched and mixed.

Dispensing

The addition of **MasterRheobuild 561** to a dry mix is not recommended.

MasterRheobuild 561 can be dosed either at the batching plant or at the placing site.

At the batching plant, introduce **MasterRheobuild 561** at the specified dosage directly into the mixer through a dispenser along with mixing water, when the concrete is thoroughly wetted (i.e. after adding at least 75% of the mixing water) and mix for at least 2 minutes.

If added at the placing site, mix for at least 2 minutes after the addition.

DOSAGE

MasterRheobuild 561 is normally dispensed at a rate of 0.7-1.2L per 100kg of cementitious. Other dosages may also be used depending on the specific working conditions.

PACKAGING

MasterRheobuild 561 is available in bulk and 205L drums.

SHELF LIFE

MasterRheobuild 561 can be stored for 12 months if stored at temperatures above 5°C, in tightly sealed original drums. If found to be frozen, thaw it and reconstitute by stirring.

PRECAUTIONS

Health: MasterRheobuild 561 does not contain any hazardous substances requiring labelling.

It is safe for use with standard precautions followed in the construction industry, such as use of hand gloves, safety goggles, etc.

For detailed Health, Safety and Environmental Recommendations, please consult and follow all instructions on the product Material Safety Data Sheet.

STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this MBCC Group 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

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