

MBT — Focussing on solutions

Master Builders Technologies (MBT) is a leading manufacturer of chemical admixtures worldwide and its Indian arm, MBT India Pvt Ltd is actively involved in the formulation of the latest admixtures specially designed to meet the increasing demands of the construction industry.

Glenium™ 51 — Tailored for RMC and precast concrete

Glenium 51 is a superplasticiser based on modified polycarboxylic ether. It has been primarily developed for applications in the ready mixed and precast concrete industries where the highest durability and performance is required.

Typical applications

The excellent dispersion properties of *Glenium 51* make it where low water cement ratios are required. This property allows the production of very high early and high ultimate strength concrete with minimal voids and therefore optimum density. Due to the strength development characteristics the elimination of steam curing in precast works may be considered as an economical option. Some of its advantages are: High workability without segregation or bleeding; Less vibration requirement; Reduced labour requirement; Improved surface finish.

Directions for use

It is a ready-to-use admixture that is added to the concrete at the time of batching.

The maximum effect is achieved when it is added after the addition of 50 to 70 percent of the water. It must not be added to the dry materials. Thorough mixing is essential and a minimum mixing cycle, of 60 second, for forced-action mixers is recommended.

Dosage

The normal dosage for *Glenium 51* is between 0.5 and 0.8 litres per 100 kg of cement (cementitious material). Dosages outside this range are permissible subject to trial mixes.

Effect on hardened concrete properties

Glenium 51 imparts the following properties to hardened concrete: increased early and ultimate compressive strengths, increased flexural strength, higher *E* modulus, improved adhesion to reinforcing and stressing steel, better resistance to carbonation, lower permeability, better resistance to aggressive atmospheric conditions, reduced shrinkage and creep, increased durability, etc.

Rheobuild 850i — for rheoplastic concretes

Rheobuild 850i is a high-range water reducing superplasticiser for rheoplastic concrete. It 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 200 mm, 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 850i* is chloride-free.

Rheobuild 850i considerably improves the properties of fresh and hardened concrete.

Primary uses

It is usually used in microsilica concrete, mass concrete pours, ready mixed concrete, long distance transport, pumped concrete, casting in hot climates, etc. Some of its benefits are to obtain: reduced thermal peaks,



***Glenium 51* is used for precast sections of tunnel works at Ghatkopar, Mumbai**

high workability for longer periods, lower pumping pressure, delayed setting with longer workability, higher ultimate strengths, reduced permeability, improved durability.

Dosage

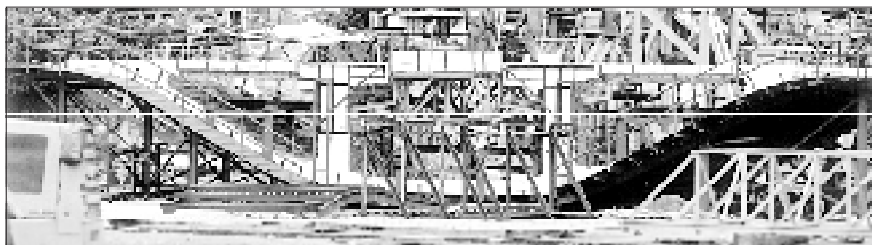
In normal concrete a dosage of between 0.5 percent and 1.2 percent is usually recommended. In HPC, a dosage may be between 1.0 and 2.5 percent. Dependant upon mix requirement, it is possible to use a higher dosage without causing any adverse effects upon the concrete.

Dispensing

Rheobuild 850i 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 percent of the mixing water has been added. The addition of *Rheobuild 850i* to dry aggregate or cement is not recommended. Automatic dispensers are available.

For more details, please contact:

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The precast girder for Worli-Bandra sea link where *Rheobuild 850i* is used