

RHEOBUILD® 1000

For the production of rheoplastic concrete

DESCRIPTION:

RHEOBUILD® 1000 high-range, water-reducing admixture, is one of a complete line of RHEOBUILD admixtures formulated to produce rheoplastic concrete. Rheoplastic concrete flows easily, maintaining high plasticity for time periods unmatched by any other superplasticized concrete. Yet it has the low water/ cement ratio of no-slump concrete, providing excellent engineering (hardened) properties. The slump-retention characteristics of rheoplastic concrete permit the addition of RHEOBUILD 1000 admixture at the batch plant .

This ready-to-use, liquid admixture meets ASTM C 494 requirements for Type A and Type F admixtures.

ADVANTAGES IN THE PLASTIC STATE:

RHEOBUILD 1000 admixture aids in the production of concrete with these special qualities:

- Plasticity range of 8 to 11" (200 to 280 mm)
- Extended slump retention
- Controlled time of set
- Cohesive and non-segregating
- Minimal bleed water

ADVANTAGES IN THE HARDENED STATE:

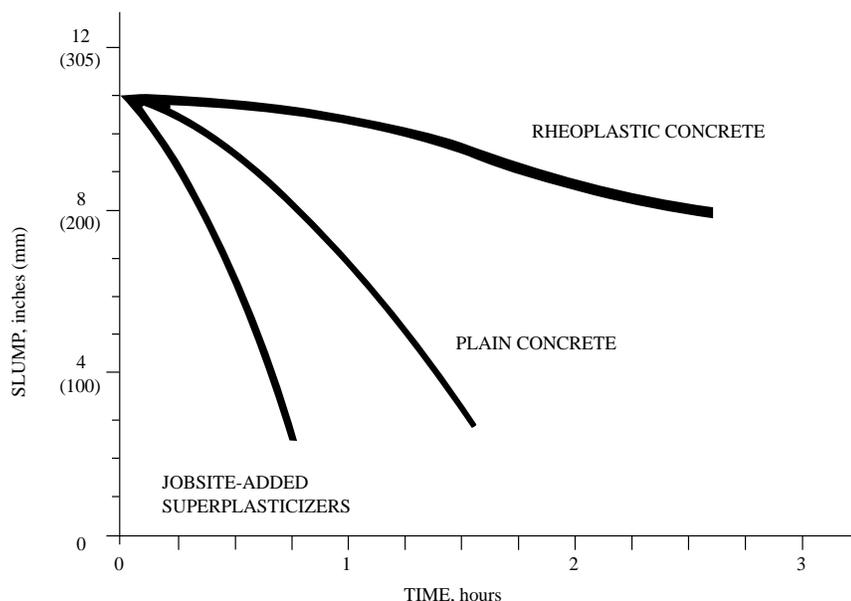
Through improved cement hydration efficiency, less dependence on consolidation energy and potential mix proportion adjustments, concrete treated with RHEOBUILD 1000 admixture provides the following engineering properties:

- Higher earlier strengths than can be achieved with conventional superplasticizers
- Increased ultimate compressive strength
- Higher modulus of elasticity
- Improved bond strength to steel
- Low permeability
- High durability
- Reduced shrinkage and creep
- Highly reliable in-place structural integrity

BENEFITS:

The economic benefits are both immediate and long-term, and extend to the total construction team. Use of rheoplastic concrete saves job time and cost through higher productivity rates or reduced labor. The higher early strength achieved with rheoplastic concrete allows for accelerated construction methods, resulting in completion dates ahead of schedule. Also, rheoplastic concrete permits engineering specification changes that allow for greater limits on the free-fall of concrete, lift heights and concrete temperatures, and potential economic mix adjustments.

SLUMP RETENTION VS. TIME



WHERE TO USE:

RHEOBUILD 1000 admixture is recommended for use in concrete where high plasticity, normal-setting characteristics and accelerated strengths are desired.

As a result of the preceding advantages and benefits, this admixture will improve performance in prestressed, precast and ready-mixed concrete applications.

RHEOBUILD 1000 admixture can be used with portland cements approved under ASTM, AASHTO or CRD specifications. The use of RHEOBUILD 1000 and a Master Builders air-entraining admixture is recommended whenever concrete is required to withstand freeze/thaw cycles. It is strongly recommended that concrete be properly cured.

RHEOBUILD 1000 admixture can be used effectively as a singular admixture or as a component in a Master Builders admixture system. When used in conjunction with another admixture, each admixture must be dispensed separately into the mix.

DIRECTIONS FOR USE:

Because slump retention is increased using RHEOBUILD 1000 admixture, it may be batched at the ready-mix plant as opposed to jobsite addition often required when using other high-range water-reducers.

NOTE: For directions on the proper evaluation and use of RHEOBUILD 1000 admixture in specific applications, contact your local Master Builders representative.

WORKABILITY:

Concrete containing RHEOBUILD 1000 admixture has the ability to maintain a rheoplastic state [8 to 11" (200 to 280 mm)] for up to two hours, if such workability is required. The precise duration of workability depends not only on temperature, but also on the type of cement, mix proportions, the nature of the aggregates, the method of transport, and the dosage rate of RHEOBUILD 1000 admixture.

For additional information on RHEOBUILD 1000 admixture or on its use in developing a concrete mixture with special performance characteristics, contact your local Master Builders representative.

QUANTITY TO USE:

RHEOBUILD 1000 admixture is recommended for use at a rate of 10 to 25 fl oz per 100 lb (0.65 to 1.6 liters per 100 kg) of cementitious materials, depending upon the application, and the amount of strength acceleration needed or slump increase desired.

This dosage range applies for most concrete mixes using average concrete ingredients. However, variations in job conditions and concrete materials, such as silica fume, may make usage rates outside the recommended dosage range desirable. In such cases, contact your local Master Builders representative.

RATE OF HARDENING:

RHEOBUILD 1000 admixture is formulated to produce normal-setting characteristics throughout its recommended dosage range.

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

PACKAGING:

RHEOBUILD 1000 admixture is supplied in 55 U.S. gallon (208 liter) drums and bulk delivery.

TEMPERATURE PRECAUTION:

If RHEOBUILD 1000 admixture has frozen, thaw at 45 °F (7 °C) or above and completely reconstitute by mild mechanical agitation. **Do not use pressurized air for agitation.**

NON-CHLORIDE, NON-CORROSIVE:

RHEOBUILD 1000 admixture will not initiate or promote corrosion of reinforcing steel embedded in concrete, prestressed concrete or concrete placed on galvanized steel floor and roof systems. Neither calcium chloride nor any chloride-based ingredients are used in the manufacture of RHEOBUILD 1000. In all concrete applications, RHEOBUILD 1000 admixture conforms to the most stringent or minimum chloride ion limits currently suggested by construction industry standards and practices.

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