



MC-Retard 060

High Performance Set Retarding Agent

Product Properties

- Chloride free & free from other corrosive ingredients
- Insensitive and unaffected by environmental changes
- Formation of micro-cracks is prevented
- Improvement in water retention capacity

Areas of Application

- Suitable for usage in reinforced concrete,
- Can also be used in pre-stressed concrete
- For ready-mix concrete, bridge construction and mass construction
- Very useful in hot climate operations

Application Notes

General

MC-Retard 060 is a powerful set retarding admixture free from chloride and other corrosive ingredients. It is suitable for usage in reinforced concrete, ready-mix concrete, pre-stressed concrete etc. It is suitable for achieving long retardation periods as in case of bridge construction and mass concretes.

MC-Retard 060 by virtue of its long and defined retardation capacity is very useful in hot concreting operations. **MC-Retard 060** is insensitive and unaffected by changes in environmental and fresh concrete temperatures. This property enables constant dosage or a slight variation in dosage when the changes occur in either prevailing or fresh concrete temperatures.

Advantages

The addition of **MC-Retard 060** to the concrete mix brings about following improvements in the fresh concrete properties:

- Improvement of workability in required workability time.
- Avoiding of the construction joints.
- Prevention of segregation through good cohesion and improvement in water retention capacity
- Improvement in the transport and the pumping efficiency
- Uniform dissipation of heat of hydration by virtue of which the formation of micro cracks, cracks because of temperature stressed is prevented.

These requirements in fresh concrete properties consequently bring about the following properties in the set concrete properties.

- Monolithic concrete texture
- Higher compressive and flexural strengths
- Higher resistance to penetration of water
- Lower creep and shrinkage stresses
- Improved resistance to aggressive attacks and chemical influences

Introducing **MC-Retard 060** in concrete, aids formation of microcrystal building in concrete by postponement of individual hydration and premature stiffening. The retarded cement paste in the concrete remains in the plastic state for a longer time and helps in formation of more micro-crystals and therefore a stable matrix.

The addition of **MC-Retard 060** renders possibility of late compaction of set retarded concrete just before the process of setting. Such a possibility to compact ensures an optimal filling in the formwork. The pores left by evaporation of surplus gauging water are filled and the consequent cracks are efficiently sealed resulting in thoroughly compacted concrete of high density.

Instructions for Use

MC-Retard 060 can be used with all standard cements. The addition can be accomplished by means of suitable dispensers and/or dosage devices during the mixing operation.

A preliminary site test is also necessary to determine the optimum quantity of admixture to obtain required retardation. Since the retardation of setting time depends upon the type of cement, mix properties, prevailing temperatures, etc. the exact quantity of admixture to be added should be predetermined in every individual case.

When hot weathers are encountered the use of **Zentrament Super BV** in combination with **MC-Retard 060** is strongly recommended.

MC-Retard 060 is compatible with other **MC-Admixtures** such as **Emceplast BV, Zentrament Super BV, Zentrament F BV, MC-Special DM, MC-Mischoel LP**, etc. It is recommended that the order of addition of different additives should be predetermined and adhered to.

Further Instructions / Precautions

- To determine individual technical suitability, preliminary tests should be carried out under application conditions. We shall be glad to assist you for your concrete technology testing/needs.
- Relevant standards for production, placing and curing of concrete should be followed.
- Efficient curing is essential for any concrete and is best-achieved using **Emcoril** range of curing compounds. This will avoid negative effects of quick water loss from the concrete.
- Depending upon the concrete mix severe over dosage of the admixture especially retarding plasticizers and superplasticizers may result in bleeding/segregation of concrete, quick loss of workability, extended initial and final setting times etc.
- Slight overdosing may not severely affect the ultimate strength of concrete provided the concrete is properly mixed, handled and placed and adequately compacted and cured.

MC-Retard 060 providing workability and set retardation



Technical Data For MC-Retard 060

Characteristic	Unit	Value	Comments
Minimum application temperature	°C	20°C	Addition in colder weather will drastically increase setting time
Recommended Mixing ratio	% by weight of cement	0.2% to 1.0%	Depending on application / Depends on preliminary site trials

Product Characteristics for MC-Retard 060

Type of Product	Chloride Free, Set Retarding Admixture
Form	Liquid
Colour	Brown
Shelf Life	12 Months from date of Manufacture
Delivery	230 Kg drums and 30 Kg pails
Storage	In Unopened Packaging. Protect from Rain, Direct Sunlight, Heat and Frost
Disposal	Empty packs completely and dispose off carefully to protect our Environment

Note: The information on this data sheet is based on our experiences and correct to the best of our knowledge. It is, however, not binding. It has to be adjusted to the individual structure, application purpose and especially to local conditions. Our data refers to the accepted engineering rules, which have to be observed during application. This provided we are liable for the correctness of this data within the scope of our terms and conditions of sale-delivery-and-service. Recommendations of our employees, which may differ from the data contained in our information sheets, are only binding if given in written form. The accepted engineering rules must be observed at all times. E. & O.E.

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