

# MasterGlenium<sup>®</sup> 117

Polycarboxylic ether based superplasticizer for the production of high quality ready-mix concrete

## DESCRIPTION

**MasterGlenium 117** is an innovative latest generation superplasticizer based on polycarboxylic ether (PCE) polymers, and is specially engineered for ready-mix concrete.

**MasterGlenium 117** is differentiated from conventional superplasticisers, such as those based on sulphonated naphthalene formaldehyde condensate in that it is based on a unique carboxylic ether polymer with long lateral chains. This greatly improves cement dispersion. At the start of the mixing process the same electrostatic dispersion occurs but the presence of the lateral chains, linked to the polymer backbone, generate a steric hindrance which stabilises the cement particles capacity to separate and disperse. This mechanism provides flowable concrete with greatly reduced water demand.

## FIELDS OF APPLICATION

**MasterGlenium 117** is used for the production of high quality ready-mix concrete.

## FEATURES AND BENEFITS

### The ready-mix producer:

- Capability of delivering high performance concrete at any time to the job site in place
- Production of a concrete with low water cement ratios with excellent workability retention properties.
- Single product for many application needs

### The contractor / applicator:

- Easier placing and faster strength development
- Improved concrete surfaces
- Guarantee to place the same concrete as specified and ordered from ready-mix plant

### The engineer:

- Insurance that concrete meets original specification
- High quality durable concrete

## PACKAGING

**MasterGlenium 117** is supplied in 210 litre drums, 1,000 litre containers or in bulk.

## STANDARDS

ASTM C-494 Type F&G  
 BS EN 934-2

## \*TYPICAL PROPERTIES\*

|                         |  |
|-------------------------|--|
| Appearance              | Clear to whitish to light brown colored liquid |
| Specific gravity @ 25°C | 1.070  |
| pH value                | 4.5 – 6.5                                      |
| Chloride content        | "chloride-free" to EN 934                      |

## APPLICATION GUIDELINES

### DOSAGE

The normally recommended dosage rate of **MasterGlenium 117** is 0.8 to 2.5 litre per 100kg of total cementitious material.

Other dosages may be recommended in special cases according to the specific site conditions. In this case please consult our Technical Services Department for advice.

### MIXING

**MasterGlenium 117** is a ready-to-use admixture to be added to the concrete as a separate component. Optimal result is obtained if **MasterGlenium 117** is poured into the concrete mix right after the addition of the first 80% of the mixing water, i.e. when all solids are wetted. Avoid adding the admixture to the dry aggregates.

### COMPATIBILITY

**MasterGlenium 117** is not compatible with **MasterRheobuild** superplasticizers.

**MasterGlenium 117** is suitable for mixes containing:

- Microsilica (Silica Fume)
- Fly Ash (PFA)
- GGBS (ground granulated blast furnace slag)

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## STORAGE AND SHELF LIFE

**MasterGlenium 117** should be stored out of direct sunlight and protected from extremes of temperature. The shelf life is 12 months when stored as above.

The occurrence of a surface layer with **MasterGlenium 117** is normal and will have no effect on the performance of the product.

## HANDLING AND TRANSPORTATION

No special requirements must be observed during use. Protection gloves and glasses are however recommended. **MasterGlenium 117** is non-flammable, non-toxic or irritant and is not subject to special transport requirements.

## HEALTH AND SAFETY

**MasterGlenium 117** contains no hazardous substances requiring labelling. For further information refer to the Material Safety Data Sheet.

## QUALITY AND CARE

All products originating from Master Builders Solutions Dubai, UAE facility are manufactured under a management system independently certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001, ISO 14001 and ISO 45001.

\* Properties listed are based on laboratory controlled tests.

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### STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this Master Builders Solutions 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

Field service where provided does not constitute supervisory responsibility. Suggestions made by Master Builders Solutions either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not Master Builders Solutions, are responsible for carrying out procedures appropriate to a specific application.

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