

MasterPolyheed 1002 (Formerly known as Rheomac 1002)

High performance superplasticiser with super retention technology for high quality concrete

DESCRIPTION

MasterPolyheed 1002 is a super-plasticizer of a new generation based on modified polycarboxylic ether polymers with super retention technology. It is designed for use in high quality ready mixed concrete, when superior performance is required, even under difficult conditions.

MasterPolyheed 1002 combines exceptional long slump life with normal setting times. Its application is especially beneficial when used in hot climate or with demanding mix designs.

MasterPolyheed 1002 does not contain added chloride and conforms to chloride ion limits required by concrete industry standards.

Chemistry

MasterPolyheed 1002 is universally applicable and provides improved rheological properties for a wide-range of concrete mixes. Performance of

MasterPolyheed 1002 in concrete is superior to conventional superplasticisers due to its unique polycarboxylate ether design.

Conventional superplasticisers, such as those based on sulphonated melamine and naphthalene formaldehyde condensates, at the same time of mixing, become absorbed onto the surface of the cement particles. This absorption takes place at a very early stage in the hydration process. The sulphonic groups of the polymer chains increase the negative charge on the surface of the cement particle and dispersion of the cement occurs by electrostatic repulsion.

Contrary to conventional superplasticisers the dispersion mechanism of **MasterPolyheed 1002** is not only based on electrostatic repulsion but in addition also on steric hindrances. **MasterPolyheed 1002** achieves outstanding water reduction and workability retention without retardation of setting time.

RECOMMENDED FOR

MasterPolyheed 1002 is recommended for:

- Ready mixed concrete with the highest requirements on durability and quality
- Construction sites which need reliable workability at elevated temperatures
- Demanding mix designs (e.g. fine sand)
- Pumped concrete
- Concrete mixes at various w/c ratios
- Suitable for a broad range and different types of cement.
- Precast concrete

FEATURES AND BENEFITS

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| Exceptional slump retention without retardation | No retempering. Ease of delivery to point of placement. High early strength. |
| High water reduction | Low permeability, high durability concrete. |
| High flowability | Extremely strong plasticizing properties. Less vibration required. Ease of placing and compaction. No segregation. |
| Low shrinkage and creep | Improves dimensional stability. Reduces risk of cracks. |
| Excellent cohesiveness | Ease of pumping. No bleeding. |
| Superior finishing | Fair-faced concrete. |

PROPERTIES

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| Form | : Liquid |
| Colour | : Light brown |
| Specific Gravity | : 1.04 - 1.08 |
| pH | : 7.5 - 9.5 |

COMPATIBILITY

MasterPolyheed 1002 is compatible with most admixtures used in the production of quality concrete, including normal and high-range water-reducing admixtures, air-entrainers, accelerators, retarders, extended set control admixtures, water-proofing admixtures, corrosion inhibitors, and shrinkage reducers.

Do not use **MasterPolyheed 1002** admixture with admixtures containing beta-naphthalene sulfonate. Erratic behaviors in slump, workability retention and pumpability may be experienced. Consult your local Master Builders Solutions representatives for advice.

DOSAGE

Dosage depends upon the mix design, the ambient conditions and the degree of water reduction and workability required. Typical dosage used is 0.5 – 2.0 L per 100 kg of cementitious materials.

Site trials are recommended to determine the actual dosage required.

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APPLICATION

Dispensing

MasterPolyheed 1002 is a ready-to-use admixture to be added to the concrete mix as a separate component.

Optimal mixing water reduction is obtained if **MasterPolyheed 1002** is poured into the concrete mix right after the addition of the first 50-70% of the mixing water. Avoid adding the admixture to the dry aggregates. A separate dispenser and feed line must be used.

PACKAGING

MasterPolyheed 1002 is available in bulk and 205L drums.

SHELF LIFE

MasterPolyheed 1002 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 : **MasterPolyheed 1002** 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.

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STATEMENT OF RESPONSIBILITY

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NOTE

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