

MasterPolyheed 8191

New generation robust Poly Carboxylate Ether (PCE) based water reducing and set-retarding admixture

Material Description

MasterPolyheed 8191 is a robust and economical water reducing and set-retarding admixture based on a specially formulated modification of the latest polycarboxylate ether chemistry from Master Builders Solutions. The product has been primarily developed for all types of normal and specialty concrete classes in the premix, precast and in situ concrete within the target slumps up to 120 mm, providing workable and cohesive mixes with less water.

MasterPolyheed 8191 has been specifically developed to enhance overall optimum performance in terms of water reduction, slump retention, compressive strengths & superior mix rheology, while maintaining control on extension of set retardation under high temperature condition.

MasterPolyheed 8191 is ideally "robust" in lean concrete mixes and in concrete that uses manufactured sand and recycled materials. **MasterPolyheed 8191** is chloride free and is compatible with all main types of cements and supplementary cementitious materials. **MasterPolyheed 8191** conforms to AS 1478 Type WRRe.

Areas of Application

MasterPolyheed 8191 is recommended under high temperature for:

- All types of concrete where a non-chloride water reducing admixture is required. eg. - foundations, slabs, driveways, floor slabs, etc
- Applications where good rheology, easier screening and finishing are required for pumped and conventionally placed concrete
- A combination of water reduction and workability in concrete mixes

Characteristics and Benefits

- Efficient dispersion of binders in ordinary concrete mixes
- Improved workability retention at higher temperatures
- Improved pump operating pressures
- Greater cohesion control of lean mixes

- Normal setting characteristics under cool conditions (i.e. winter in combination with accelerators) allowing earlier finishing of slabs
- Reduced water content for a given workability

A new, unique mechanism of action using the polycarboxylate ether (PCE) chemistry in **MasterPolyheed 8191** improves the effectiveness of cement dispersion coupled with rheology improvement to effect improved hydration.

With this admixture, the retarder functions coat the cement grains first and then, the polymers adsorb on the other sites of cement grains at the start of the mixing process. The retarder functions impart extended retardation mildly and the polymers prevent cement grains to be flocculated usefully so long. **MasterPolyheed 8191** has a different chemical structure from the traditional water reducers. It is based on the latest generation of carboxylic ether polymer technology from Master Builders Solutions, which is designed to offer the concrete producer a more robust, versatile & consistent performing admixture.

Properties

Relative Density	1.104 ± 0.02
pH	9.6 ± 1.0
Chloride Content	< 0.05%
Aspect	Clear yellowish liquid**

** Color may vary slightly between opaque brownish and yellowish. However, this does not change the efficacy and product performance.

Dosage

MasterPolyheed 8191 is a set retarding versatile admixture with a dose rate between 250 and 500 ml / 100 kg of cementitious material. An increase in the above dose rate may result in increased water reduction, workability and/or set time and possible improved pumpability and rheology, however, this is dependent on mix design characteristics.

The optimum dosage rate in each instance should be determined by correctly conducted trials using materials and conditions of use under the supervision of a Master Builders Solutions Technical Sales Representative.



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Compatibility

MasterPolyheed 8191 is not compatible with admixtures containing β -naphthalene sulfonate condensates (BNS).

MasterPolyheed 8191 is compatible with all air entraining concrete admixtures, however the dosage of air entraining agent when added with MasterPolyheed 8191 may need to be altered to achieve required air entrainment.

Initial lab and field trials are recommended to verify exact dose rates. MasterPolyheed 8191 can be used in combination with other Master Builders Solutions admixtures to achieve cost effective performance; like addition with MasterPolyheed mid-range water reducers, MasterGlenium range of high range water reducers. Each admixture should be dispensed separately into the mix to ensure complete distribution throughout the mix. MasterPolyheed 8191 should not be used in conjunction with other admixtures unless specific test information is available or advised by your local Master Builders Solutions Technical Sales Representative.

Packaging

MasterPolyheed 8191 is available in 1000 litre pallecons and bulk delivery.

Storage & Shelf Life

Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame. Store protected against freezing.

Protect from direct sunlight.

Protect from temperatures below: 5 °C The packed product is destroyed at low temperatures or by frost.

Protect from temperatures above: 45 °C The packed product will be damaged by high temperatures.

MasterPolyheed 8191 has a shelf life of 12 months.

Precautions

For the full health and safety hazard information and how to safely handle and use this product, make sure that you obtain a copy of the Safety Data Sheet (SDS) from our office or website.

Disclaimer

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STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this MB Solutions Australia Pty Ltd 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 and for ensuring that the application and use of the product is in accordance with the manufacturer's guidelines and recommendations.

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