

MasterPolyheed[®] 1025

Mid-Range Water-Reducing Admixture

Description

MasterPolyheed 1025 admixture is a patent pending ready-to-use mid-range water-reducing admixture. MasterPolyheed 1025 admixture, based on MasterGlenium[®] technology, is very effective in producing concrete with different levels of workability and enhanced finishing characteristics. MasterPolyheed 1025 admixture meets ASTM C 494/C 494M requirements for Type A, water-reducing, and Type F, high-range water-reducing, admixtures.

Applications

Recommended for use in:

- All concrete applications where superior workability, pumpability and finishability qualities are desired, in particular, flatwork, pumped concrete and pervious concrete
- Concrete containing manufactured sand and harsh concrete mixtures

Features

- Dosage flexibility – provides up to 20% water reduction
- Reduced water content for a given level of workability
- Provides better slump retention
- Provides excellent workability
- Excellent finishability, even with manufactured sands and in lean mixtures

Benefits

- Can be used in a wide variety of concrete mixtures as a multi-purpose admixture meeting the performance requirements for ASTM Type A or Type F admixtures
- Faster setting at higher dosages compared to other water-reducing admixtures
- Enhanced flowability, strength and durability
- Reduces efforts required to finish concrete
- Lowers in-place cost
- Increases service life of structures

Performance Characteristics

Setting Time: Concrete produced with MasterPolyheed 1025 admixture sets faster than a mixture containing a typical mid-range water-reducing admixture.

Mixture Data: 517 lb/yd³ (307 kg/m³) of Type I/II cement; slump 8 in. (200 mm); non-air-entrained concrete; Admixture dosage adjusted for 5-6% water reduction.

Setting Time

Mixture	Initial Set (h:min)	Difference over Reference (h:min)
Reference	4:40	–
Ref. Mid Range Water Reducer	5:35	+0:55
MasterPolyheed 1025 admixture	5:05	+0:25

Compressive Strength: Concrete produced with MasterPolyheed 1025 admixture achieves higher compressive strength at later ages compared to plain concrete and concrete mixtures produced with a typical mid-range water-reducing admixture.

Mixture Data: 517 lb/yd³ (307 kg/m³) of Type I/II cement; slump 8 in. (200 mm); non-air-entrained concrete; Admixture dosage adjusted for 16-17% water reduction.

Compressive Strength, psi (MPa)

Mixture	1-Day	7-Day	28-Day
Plain	1340 (9.2)	3490 (24.1)	4570 (31.5)
Ref. MRWR**	1840 (12.7)	4840 (33.4)	6180 (42.6)
MasterPolyheed 1025 admixture	2080 (14.3)	4960 (34.2)	6520 (45.0)

**Mid-range water reducer

Note: The data shown are based upon controlled laboratory tests. Reasonable variations from the results shown here may be experienced as a result of differences in concrete making materials and jobsite conditions.

Guidelines for Use

Dosage: MasterPolyheed 1025 admixture has a recommended dosage range of 3 to 12 fl oz/cwt (195 to 780 mL/100 kg) of cementitious materials for most concrete mixtures. A dosage range of 3 to 5 fl oz/cwt (195 to 325 mL/100 kg) is typical for Type A applications and up to 12 fl oz/cwt (780 mL/100 kg) for mid-range and high-range applications. Because of variations in concrete materials, job site conditions, and/or applications, dosages outside of the recommended range may be required. In such cases, contact your local sales representative.

Mixing: MasterPolyheed 1025 admixture can be added with the initial batch water or at the end of the batching sequence.

Product Notes

Corrosivity – Non-Chloride, Non-Corrosive: MasterPolyheed 1025 admixture will neither initiate nor promote corrosion of reinforcing or prestressing steel embedded in concrete, or of galvanized steel floor and roof systems. Neither calcium chloride nor other chloride-based ingredients are used in the manufacture of MasterPolyheed 1025 admixture.

Compatibility: MasterPolyheed 1025 admixture is compatible with most admixtures and can be used in combination with other Master Builders Solutions admixtures, unless stated otherwise. When used in conjunction with other admixtures, each admixture must be dispensed separately into the concrete mixture.

MasterPolyheed 1025 admixture is designed to be used with MasterAir® AE 200 air-entraining admixture when the production of air-entrained concrete is desired. **Do not use MasterPolyheed 1025 admixture in combination with naphthalene-based admixtures. Erratic performance in slump may be experienced.**

Storage and Handling

Storage Temperature: MasterPolyheed 1025 admixture should be stored between 35 and 105 °F (2 and 41 °C). If MasterPolyheed 1025 admixture freezes, thaw at 40 °F (5 °C) or above and completely reconstitute using mild mechanical agitation. **Do not use pressurized air for agitation.**

Shelf Life: MasterPolyheed 1025 admixture has a minimum shelf life of 12 months. Depending on storage conditions, the shelf life may be greater than stated. Please contact your local sales representative regarding suitability for use and dosage recommendations if the shelf life of MasterPolyheed 1025 admixture has been exceeded.

Dispensing: Consult your local sales representative for the proper dispensing equipment for MasterPolyheed 1025 admixture.

Packaging

MasterPolyheed 1025 admixture is supplied in 55 gal (208 L) drums, 275 gal (1040 L) totes, and by bulk delivery.

Related Documents

Safety Data Sheets: MasterPolyheed 1025 admixture

Additional Information

For additional information on MasterPolyheed 1025 admixture or its use in developing concrete mixtures with special performance characteristics, contact your local sales representative.

Master Builders Solutions, a brand of MBCC Group, is a global leader of innovative chemistry systems and formulations for construction, maintenance, repair and restoration of structures. The Admixture Systems business provides advanced products, solutions and expertise that improve durability, water resistance, energy efficiency, safety, sustainability and aesthetics of concrete structures, above and below ground, helping customers to achieve reduced operating costs, improved efficiency and enhanced finished products.

Utilizing worldwide resources, the Master Builders Solutions community of experts are passionate about providing solutions to challenges within all stages of construction, as well as the life cycle of a structure. At Master Builders Solutions we create sustainable solutions for construction around the globe.

Limited Warranty Notice

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