

03 30 00	Cast-in-Place Concrete
03 40 00	Precast Concrete
03 70 00	Mass Concrete

MasterPolyheed[®] 900

Mid-Range Water-Reducing Admixture

Description

MasterPolyheed 900 ready-to-use mid-range water-reducing admixture is very effective in producing concrete with different levels of workability and with enhanced finishing characteristics. It is especially effective when used in lean concrete mixtures and/or concrete with manufactured sand. MasterPolyheed 900 admixture will meet ASTM C 494/C 494M requirements for Type A, 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

- Provides excellent workability of plastic concrete
- Reduced water content for a given level of workability
- Provides up to 15% water reduction
- Can be used in a wide variety of concrete mixtures as a Type A admixture
- Provides faster setting compared to conventional water-reducing admixtures

Benefits

- Enhanced strength and durability properties of concrete
- Reduces effort required to finish
- Lowers in-place cost
- Increases service life of structures

Performance Characteristics

Setting Time: Concrete produced with MasterPolyheed 900 admixture sets faster than concrete treated with a conventional water-reducing admixture when used at higher dosages to achieve mid-range water reduction.

Compressive Strength: Concrete produced with MasterPolyheed 900 admixture achieves higher compressive strength at an early age compared to plain concrete and concrete mixtures produced with a conventional water-reducing admixture.

Mixture Data: 517 lb/yd³ (307 kg/m³) of Type I/II cement; slump 6 in. (150 mm); non-air-entrained concrete; admixture dosage adjusted for 9-10% water reduction.

Setting Time (h:min)

Mixture	Initial Set	Difference
Reference	5:00	—
Conventional Water Reducer	6:12	+1:12
MasterPolyheed 900 admixture	5:18	+0:18



Compressive Strength, psi (MPa)

Mixture	1-Day	7-Day	28-Day
Plain	1540 (10.6)	3800 (26.2)	5260 (36.3)
Conventional Water Reducer	1890 (13.0)	4460 (30.8)	5820 (40.1)
MasterPolyheed 900 admixture	2030 (14.0)	4370 (30.1)	5950 (41.0)

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: The recommended dosage range for MasterPolyheed 900 admixture is 3 to 15 fl oz/cwt (195 to 980 mL/100 kg) of cementitious materials for most concrete mixtures. A dosage range of 5 to 8 fl oz/cwt (325 to 520 mL/100 kg) is typical for most Type A applications and up to 15 fl oz/cwt (980 mL/100 kg) for mid-range water-reducing requirements. 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: For maximum working time, the addition of MasterPolyheed 900 admixture should be delayed during the batching process.

Product Notes

Corrosivity – Non-Chloride, Non-Corrosive: MasterPolyheed 900 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 900 admixture.

Compatibility: MasterPolyheed 900 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.

Storage and Handling

Storage Temperature: MasterPolyheed 900 admixture should be stored between 35 and 105 °F (2 and 41 °C). If MasterPolyheed 900 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 900 admixture has a minimum shelf life of 18 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 900 admixture has been exceeded.

Packaging

MasterPolyheed 900 admixture is supplied in 55 gal (208 L) drums, 275 gal (1040 L) totes, and by bulk delivery.

Related Documents

Safety Data Sheets: MasterPolyheed 900 admixture

Additional Information

For additional information on MasterPolyheed 900 admixture or its use in developing concrete mixtures with special performance characteristics, contact your local sales representative.

Master Builders Solutions creates technologies for the construction industry inspiring people to build better. We are active in ~40 countries and operate 35 production sites with over 1,600 employees. We develop, produce, and market high-quality chemical admixtures, as well as adjacent core technologies, to master the challenges of today and support a decarbonized future. Our people are pivotal and pair leading technologies and a strong brand heritage to surpass our customers' expectations and drive continuous value creation.

Limited Warranty Notice

Master Builders Solutions Admixtures US, LLC ("Master Builders Solutions") warrants this product to be free from manufacturing defects and to meet the technical properties on the current Technical Data Guide, if used as directed within shelf life. Satisfactory results depend not only on quality products but also upon many factors beyond our control. MASTER BUILDERS SOLUTIONS MAKES NO OTHER WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ITS PRODUCTS. The sole and exclusive remedy of Purchaser for any claim concerning this product, including but not limited to, claims alleging breach of warranty, negligence, strict liability or otherwise, is shipment to purchaser of product equal to the amount of product that fails to meet this warranty or refund of the original purchase price of product that fails to meet this warranty, at the sole option of Master Builders Solutions. Any claims concerning this product must be received in writing within one (1) year from the date of shipment and any claims not presented within that period are waived by Purchaser. MASTER BUILDERS SOLUTIONS WILL NOT BE RESPONSIBLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFITS) OR PUNITIVE DAMAGES OF ANY KIND.

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