

03 30 00	<b>Cast-in-Place Concrete</b>
03 40 00	<b>Precast Concrete</b>
03 70 00	<b>Mass Concrete</b>

# MasterPolyheed<sup>®</sup> 1720

## Mid-Range Water-Reducing Admixture

### Description

MasterPolyheed 1720 mid-range water-reducing admixture, based on the next generation of polycarboxylate technology, utilizes state-of-the-art molecular engineering to provide enhanced concrete performance and value for concrete producers and contractors.

MasterPolyheed 1720 admixture meets ASTM C 494/C 494M compliance 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

- Reduced water content for a given level of workability
- Excellent performance across a wide concrete slump range, especially the difficult slump range of 5-8 in. (125-200 mm)
- Superior concrete workability, pumpability and finishability qualities even in concrete mixtures containing manufactured sand and low amounts of cementitious materials
- Faster time of setting at mid to higher dosage rates

### Benefits

- Significantly reduced costs for concrete placement and finishing
- Lower in-place concrete costs
- Higher strength at all ages
- Enhanced concrete durability
- Increased service life of concrete structures

### Performance Characteristics

**Time of Setting:** Concrete produced with MasterPolyheed 1720 admixture will typically set faster relative to concrete produced with a conventional normal or mid-range water-reducing admixture.

**Mixture Data:** 470 lb/yd<sup>3</sup> (279 kg/m<sup>3</sup>) of Type I cement; slump 7 to 8 in. (180 to 205 mm); non-air-entrained concrete.

Mixture	Dosage, fl oz/cwt (mL/100 kg)	Initial Set (h:min)	Difference (h:min)
Conventional MRWR**	3 (195)	5:05	—
MasterPolyheed 1720 admixture	3 (195)	4:45	-0:20
Conventional MRWR	6 (390)	5:25	—
MasterPolyheed 1720 admixture	6 (390)	4:40	-0:45
Conventional MRWR	12 (780)	7:25	—
MasterPolyheed 1720 admixture	12 (780)	5:10	-2:15

\*\*Mid-range water reducer



**Mixture Data:** 440 lb/yd<sup>3</sup> (261 kg/m<sup>3</sup>) of Type I cement; 77 lb/yd<sup>3</sup> (46 kg/m<sup>3</sup>) Class F fly ash; slump 6 to 6.25 in. (150 to 160 mm); non-air-entrained concrete.

Difference Mixture	Dosage, fl oz/cwt	Initial Set	
	(mL/100 kg)	(h:min)	(h:min)
Conventional MRWR	8 (520)	6:50	—
MasterPolyheed 1720 admixture	8 (520)	5:14	-1:36

**Compressive Strength:** Concrete produced with MasterPolyheed 1720 admixture will typically have higher early compressive strength compared to concrete produced with a conventional normal or mid-range water-reducing admixture.

Mixture	Dosage, fl oz/cwt	I-Day	7-Day	28-Day
	(mL/100 kg)	psi (MPa)	psi (MPa)	psi (MPa)
Conventional MRWR	8 (520)	1770 (12.2)	3910 (26.9)	5330 (36.7)
MasterPolyheed 1720 admixture	8 (520)	1900 (13.1)	3820 (26.3)	5460 (37.6)

## Guidelines for Use

**Dosage:** MasterPolyheed 1720 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. As the dosage rate of MasterPolyheed 1720 admixture increases up to 12 fl oz/cwt (780 mL/100 kg) of cementitious materials, faster concrete set characteristics are maintained and higher early compressive strength performance is achieved. 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 1720 admixture can be added with the initial batch water or as a delayed addition. However, optimum water reduction is generally obtained with a delayed addition.

## Product Notes

**Corrosivity – Non-Chloride, Non-Corrosive:** MasterPolyheed 1720 admixture will neither initiate nor promote corrosion of reinforcing steel embedded in concrete, prestressing steel or of galvanized steel floor and roof systems. Neither calcium chloride nor other chloride-based ingredients are used in the manufacture of MasterPolyheed 1720 admixture.

**Compatibility:** MasterPolyheed 1720 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. **Do not use MasterPolyheed 1720 admixture in combination with admixtures containing beta-naphthalene sulfonate. Erratic behaviors in slump, workability retention and pumpability may be experienced.**

MasterPolyheed 1720 admixture can be used in combination with all Master Builders Solutions air-entraining admixtures when the production of air-entrained concrete is desired. MasterPolyheed 1720 admixture is formulated for optimum performance with MasterAir<sup>®</sup> AE 90 and MasterAir VR 10 air-entraining admixtures.

## Storage and Handling

**Storage Temperature:** MasterPolyheed 1720 admixture must be stored at temperatures above 40 °F (5 °C). If MasterPolyheed 1720 admixture freezes, thaw and reconstitute by mechanical agitation. **Do not use pressurized air for agitation.**

**Shelf Life:** MasterPolyheed 1720 admixture has a minimum shelf life of 6 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 1720 admixture has been exceeded.

## Packaging

MasterPolyheed 1720 admixture is supplied in 55 gal (208 L) drums, 275 gal (1040 L) totes and by bulk delivery.

## Related Documents

Safety Data Sheets: MasterPolyheed 1720 admixture

## Additional Information

For additional information on MasterPolyheed 1720 admixture or on 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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