

■ - BASF

The Chemical Company

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3	03 30 00	Product Data Cast-in-Place Concrete Precast Concrete Mass Concrete
	03 40 00	
	03 70 00	

Description

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

Applications

Recommended for use in:

- Conventionally-placed concrete mixtures containing a wide range of cements, slag cement, Class C and F fly ashes, silica fume and manufactured sands
- Reinforced, precast, prestressed, lightweight or normal weight concrete and pumped concrete
- Residential/commercial flatwork and formed surfaces
- Concrete where 5 to 15% water reduction is desired
- Concrete where normal setting times are required
- Concrete where enhanced finishability is desired
- Concrete where flowability and increased durability are needed
- Rheodynamic® Self-Consolidating Concrete
- 4x4™ Concrete
- Pervious Concrete

POLYHEED® 900

Mid-Range Water-Reducing Admixture

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
- Increased ease in finishing concrete
- Provides lower in-place cost
- Increases service life of structures

Performance Characteristics

Setting Time: Concrete produced with PolyHeed 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 PolyHeed 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	Difference
Plain	5:00	REF
Conventional Water Reducer	6:12	+1:12
PolyHeed 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)
PolyHeed 900 admixture	2030 (14.0)	4370 (30.1)	5950 (41.0)

Note: The data shown are based on 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.

50% less
45 min to this

Master Builders

Product Data: POLYHEED® 900

Guidelines for Use

Dosage: The recommended dosage range for PolyHeed 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 BASF Construction Chemicals representative.

Mixing: For maximum working time, the addition of PolyHeed 900 admixture should be delayed during the batching process.

Product Notes

Corrosivity – Non-Chloride, Non-Corrosive: PolyHeed 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 PolyHeed 900 admixture. In all concrete applications, PolyHeed 900 admixture will conform to the most stringent or minimum chloride ion limits currently suggested by construction industry standards and practices.

Compatibility: PolyHeed 900 admixture is compatible with most admixtures and can be used in combination with other BASF Construction Chemicals, 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: PolyHeed 900 admixture should be stored between 35 and 105 °F (2 and 41 °C). If PolyHeed 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: PolyHeed 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 BASF Construction Chemicals representative regarding suitability for use and dosage recommendations if the shelf life of PolyHeed 900 admixture has been exceeded.

Packaging

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

Related Documents

Material Safety Data Sheets: PolyHeed 900 admixture.

Additional Information

For additional information on PolyHeed 900 admixture or its use in developing concrete mixtures with special performance characteristics, contact your BASF Construction Chemicals representative.

The Admixture Systems business of BASF Construction Chemicals is a leading provider of innovative additives for specialty concrete used in the ready mix, precast, manufactured concrete products, underground construction and paving markets throughout the NAFTA region. The Company's respected Master Builders brand products are used to improve the placing, pumping, finishing, appearance and performance characteristics of concrete.

BASF Construction Chemicals, LLC
Admixture Systems

www.masterbuilders.com

United States 23700 Chagrin Boulevard, Cleveland, Ohio 44122-5544 ■ Tel: 800 628-9990 ■ Fax: 216 839-8821
Canada 1800 Clark Boulevard, Brampton, Ontario L6T 4M7 ■ Tel: 800 387-5862 ■ Fax: 905 792-0651

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**Master
Builders**



The Chemical Company

April 22, 2007

Kearney Concrete Company
2001 Avenue C
Kearney, Nebraska, 68847

Attention: Kyle Poff
Project:
Project location:

Certificate of Conformance

PolyHeed® 900

BASF Construction Chemicals, LLC* Admixture for Concrete

(*Previously doing business as BASF Admixtures, Inc. and prior to that as Degussa Admixtures, Inc. and Master Builders, Inc.)

I, Richard Hubbard, Technical Specialist for BASF Construction Chemicals, LLC, Cleveland, Ohio, certify:

That no calcium chloride or chloride based ingredient is used in the manufacture of PolyHeed® 900; and

That PolyHeed® 900, based on the chlorides originating from all the ingredients used in its manufacture, contributes less than 0.00011 percent (1.1 ppm) chloride ions by weight of the cement when used at the rate of 65 ml per 100 kg (1 fluid ounce per 100 pounds) of cement; and

That PolyHeed® 900 meets the requirements for a Type A, Water-Reducing Admixture specified in ASTM C 494, Corps of Engineers' CRD-C 87, and AASHTO M194, the Standard Specifications for Chemical Admixtures for Concrete.

A handwritten signature in black ink that reads "Richard Hubbard III".

Richard Hubbard
Technical Specialist
BASF Construction Chemicals, LLC

BASF Construction Chemicals, LLC
23700 Chagrin Boulevard
Cleveland, OH 44122
216 839-7500 ph
www.basf-admixtures.com

**Master
Builders**
Admixture Solutions



The Chemical Company

September 6, 2007

KEARNEY CONCRETE CO
2001 AVE. C
Kearney, Nebraska 68847

Attention: Kyle Poff
Project: Bridge resurfacing/silica pfume concrete
Project location: Shelton, Ne

Certificate of Conformance
PolyHeed® 900
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Richard Hubbard
Technical Specialist
BASF Construction Chemicals, LLC

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