BASF
The Chemical Company

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

POLYHEED® 1025

Mid-Range Water-Reducing Admixture

Description

PolyHeed 1025 admixture is a patent-pending technology, ready-to-use mid-range water-reducing admixture. PolyHeed 1025 admixture, based on Glenium® technology, is very effective in producing concrete with different levels of workability for applications such as pumping and flatwork. PolyHeed 1025 admixture is also very effective in producing concrete with enhanced finishing characteristics. PolyHeed 1025 admixture will meet ASTM C 494/C 494M requirements for Type A, water-reducing, and Type F, high-range 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 20% 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
- 4x4™ Concrete
- Pervious Concrete

Features

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

Benefits

- Faster setting at higher dosages compared to other water-reducing admixtures
- Enhanced concrete strength and durability
- Increased ease in finishing concrete
- Provides lower in-place cost
- Increases service life of structures

Performance Characteristics

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

Mixture Data: 517 lb/yd^3 (307 kg/m^3) 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 (h:min)
Reference	4:40	–
Ref. Mid Range Water Reducer	5:35	+0:55
PolyHeed 1025 admixture	5:05	+0.25

Compressive Strength: Concrete produced with PolyHeed 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/yd^3 (307 kg/m^3) 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. Mid Range Water Reducer	1840 (12.7)	4840 (33.4)	6180 (42.6)
PolyHeed 1025 admixture	2080 (14.3)	4960 (34.2)	6520 (45.0)

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.

Master Builders

Product Data: POLYHEED® 1025

Guidelines for Use

Dosage: PolyHeed 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 BASF Construction Chemicals representative.

Mixing: PolyHeed 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: PolyHeed 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 PolyHeed 1025 admixture. In all concrete applications, PolyHeed 1025 admixture will conform to the most stringent or minimum chloride ion limits currently suggested by construction industry standards and practices.

Compatibility: PolyHeed 1025 admixture is compatible with most admixtures and can be used in combination with other BASF Construction Chemicals admixtures, unless stated otherwise. When used in conjunction with other admixtures, each admixture must be dispensed separately into the concrete mixture.

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

Storage and Handling

Storage Temperature: PolyHeed 1025 admixture should be stored between 35 and 105 °F (2 and 41 °C). If PolyHeed 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.***

Dispensing: Consult your BASF Construction Chemicals representative for the proper dispensing equipment for PolyHeed 1025 admixture.

Shelf Life: PolyHeed 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 BASF Construction Chemicals representative regarding suitability for use and dosage recommendations if the shelf life of PolyHeed 1025 admixture has been exceeded.

Packaging

PolyHeed 1025 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 1025 admixture.

Additional Information

For additional information on PolyHeed 1025 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

Master Builders