

Description

PolyHeed FC 100 patented, ready-to-use non-chloride, mid-range water-reducing admixture is a new generation of admixture based on polycarboxylate chemistry.

It is specifically formulated to provide normal setting times with fly ash and/or slag cement concrete mixtures.

PolyHeed FC 100 admixture meets ASTM C 494/C 494M requirements for Type A, water-reducing, Type C, accelerating, and Type E, water-reducing and accelerating, admixtures.

Applications

Recommended for use in:

- All concrete containing increased levels of fly ash or slag cement replacements
- Conventionally-placed concrete mixtures containing a wide range of cements
- Rheodynamic® Self-Consolidating Concrete
- 4x4™ Concrete
- Pervious Concrete

POLYHEED® FC 100

Mid-Range Water-Reducing Admixture

Features

- True mid-range water reduction (5-18%) and excellent performance across a wide slump range, especially the difficult slump range of 6-8 in. (150-200 mm)
- Superior workability/pumpability even in concrete mixtures with low contents of cementitious materials
- Consistent performance in low to high slump concrete mixtures, in particular, the mid-range slump of 5-8 in. (125-200 mm)
- Provides normal setting times with fly ash and slag cement concrete mixtures

Benefits

- Improved performance with a wide range of cements, fly ashes, silica fume, slag cement and aggregates (including coarse and manufactured sands)
- Opportunity to increase the level of fly ash or slag cement replacement in a given concrete mixture
- Reduced in-place concrete costs

Performance Characteristics

Mixture Data: 600 lb/yd³ (356 kg/m³) total cementitious content; 25% cement replacement with Class C fly ash for the Class C reference and PolyHeed FC 100 admixture mixes; slump, 6-7 in. (150-175 mm); air content 5-6%; concrete temperature, 70 °F (21 °C); ambient temperature, 50 °F (10 °C).

Setting Time

Mixture	Initial Set (h:min)	Difference (h:min)
Plain Ref.	7:48	–
Class C Ref.	12:15	+4.27
PolyHeed FC100 admixture @		
10 fl oz/cwt (650 mL/100 kg)	9:22	+1:34
20 fl oz/cwt (1300 mL/100 kg)	6:54	–0:54

Compressive Strength Performance

Mixture	7-Day			28-Day		
	psi	MPa	%	psi	MPa	%
Plain Ref.	3450	23.8	100	5420	37.4	100
Class C. Ref.	2690	18.5	78	4820	33.2	89
PolyHeed FC100 admixture @						
10 fl oz/cwt (650 mL/100 kg)	3600	24.8	104	5140	35.4	95
20 fl oz/cwt (1300 mL/100 kg)	4250	29.3	123	6460	44.5	119

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.

Product Data: POLYHEED® FC 100

Guidelines for Use

Dosage: PolyHeed FC 100 admixture has a recommended dosage range of 8-30 fl oz/cwt (520-1,950 mL/100 kg) of total cementitious materials for most concrete mixes.

BASF Construction Chemicals does not recommend the use of dosages outside the recommended range without trial testing. Consult your local BASF Construction Chemicals representative for assistance in determining the dosage for optimum performance.

Product Notes

Corrosivity – Non-Chloride, Non-Corrosive: PolyHeed FC 100 admixture will neither initiate nor promote corrosion of reinforcing or prestressing steel embedded in concrete or of galvanized steel floor and roof systems. PolyHeed FC 100 admixture does not contain intentionally added calcium chloride or other chloride-based ingredients.

Compatibility: PolyHeed FC 100 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.

Storage and Handling

Storage Temperature: If PolyHeed FC 100 admixture freezes, thaw at 35 °F (2 °C) or above and completely reconstitute by mild mechanical agitation. **Do not use pressurized air for agitation.**

Shelf Life: PolyHeed FC 100 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 FC 100 admixture has been exceeded.

Packaging

PolyHeed FC 100 admixture is supplied in 55 gal (208 L) drums, 275 gal totes (1,040 L) and by bulk delivery.

Related Documents

Material Safety Data Sheets: PolyHeed FC 100 admixture.

Additional Information

For additional information on PolyHeed FC 100 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

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