

## Description

PolyHeed N admixture is a multi-component, chloride-bearing, mid-range water-reducing admixture. PolyHeed N admixture meets ASTM C 494/C 494M requirements for Type A, water-reducing admixtures.

## Applications

Recommended for use in:

- All concrete where normal setting characteristics, and superior workability, pumpability and finishability qualities are desired
- Concrete placed in the mid-range slump of 5-8 in. (125-200 mm)
- Concrete mixes containing a wide range of cements, slag cement, Class C and F fly ashes, silica fume and aggregates
- 4x4™ Concrete
- Pervious Concrete
- Rheodynamic® Self-Consolidating Concrete

# POLYHEED® N

## Mid-Range Water-Reducing Admixture

### Features

- True mid-range (5-15%) water reduction and excellent performance across a wide concrete slump range, especially the difficult slump range of 5-8 in. (125-200 mm)
- Reduced water content for a given slump
- Superior workability, pumpability and finishability qualities even in concrete mixes containing low amounts of cementitious materials
- Compressive and flexural strength performance increased at all ages
- Normal concrete setting time throughout the recommended dosage range
- Improved performance with a wide range of cements, fly ashes, silica fume, slag cement, and aggregates (including coarse and manufactured sands)

### Benefits

- Superior workability and pumpability in various concrete applications
- Superior finishing characteristics for residential/commercial flatwork and formed surfaces
- Significantly reduced placement and finishing time resulting in lower in-place concrete costs

### Performance Characteristics

**Mixture Data:** 500 lb/yd<sup>3</sup> (295 kg/m<sup>3</sup>) of Type I cement; slump, 6-3/4 in. (170 mm); Non-air-entrained concrete; Concrete temperature 70 °F (21 °C); Ambient temperature, 70 °F (21 °C).

### Setting Time Performance<sup>1</sup>

Mixture	Initial Set (h:min)	Difference (h:min)
Plain	4:46	–
PolyHeed N admixture @		
5 fl oz/cwt (325 mL/100 kg)	4:34	–0:12
10 fl oz/cwt (650 mL/100 kg)	4:56	+0:10
15 fl oz/cwt (980 mL/100 kg)	5:28	+0:42

### Compressive Strength Performance

Mixture	7-Day			28-Day		
	psi	MPa	%	psi	MPa	%
Plain	3390	23.4	100	4230	29.2	100
PolyHeed N admixture @						
5 fl oz/cwt (325 mL/100 kg)	4110	28.3	121	4950	34.1	117
10 fl oz/cwt (650 mL/100 kg)	4290	29.6	126	5510	38.0	130
15 fl oz/cwt (980 mL/100 kg)	4770	32.9	141	5920	40.8	140

<sup>1</sup>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® N

## Guidelines for Use

**Dosage:** PolyHeed N mid-range water-reducing admixture has a recommended dosage range of 3-15 fl oz/cwt (195-980 mL/100 kg) of cementitious material for most concrete mixtures.

As the dosage of PolyHeed N admixture increases to 15 fl oz/cwt (980 mL/100 kg) of cementitious materials, normal concrete setting time characteristics are maintained and early and ultimate compressive strengths increase.

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

## Product Notes

**Corrosivity:** PolyHeed N admixture contains intentionally-added calcium chloride. The chloride ion content of this admixture, due to chlorides originating from all the ingredients used in its manufacture, is less than 0.0057% by weight of cement when used at a dosage of 1 fl oz/cwt (65 mL/100 kg) of cement. The ACI 318 building code requirements for concrete contains limits for water-soluble chloride ions in concrete for specific applications. BASF Construction Chemicals recommends strict adherence to chloride limits in project specifications. Please contact your BASF Construction Chemicals representative for other product recommendations if a project specification prohibits the use of chloride-bearing admixtures.

**Compatibility:** PolyHeed N 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 N 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 N 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 N admixture has been exceeded.

## Packaging

PolyHeed N 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 N admixture.

## Additional Information

For additional information on PolyHeed N 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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