

Description

PolyHeed 997 admixture is a patented multi-component, non-chloride, mid-range water-reducing admixture. PolyHeed 997 admixture meets 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 mixes containing a wide range of cements, slag cement, Class C and F fly ashes, silica fume and aggregates
- Reinforced, precast, prestressed, lightweight or normal weight concrete and pumped concrete
- Residential/commercial flatwork and formed surfaces
- Rheodynamic® Self-Consolidating Concrete
- 4x4™ Concrete
- Pervious Concrete

POLYHEED® 997

Mid-Range Water-Reducing Admixture

Features

- True mid-range water reduction (5-15%) and excellent performance across a wide concrete slump range, especially the difficult slump range of 5-8 in. (125-200 mm)
- 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
- Strength performance comparable to chloride-bearing, water-reducing admixtures at all ages
- Superior finishing characteristics for residential/commercial flatwork and formed surfaces

Benefits

- Significantly reduced placement and finishing time resulting in lower in-place concrete costs
- Improved concrete durability to damage from freezing and thawing
- Increased service life of concrete structures

Performance Characteristics

Mixture Data: 500 lb/yd³ (295 kg/m³) of Type I cement; slump, 6-7 in. (150-180 mm); 5-6% air; concrete temperature 70 °F (21 °C); ambient temperature, 70 °F (21 °C).

Setting Time Performance¹

| Mixture | Initial Set h:min | Difference h:min |
|------------------------------|----------------------|---------------------|
| Plain | 6:01 | – |
| PolyHeed 997 admixture @ | | |
| 5 fl oz/cwt (325 mL/100 kg) | 6:22 | +0:21 |
| 10 fl oz/cwt (650 mL/100 kg) | 6:57 | +0:56 |
| 15 fl oz/cwt (980 mL/100 kg) | 7:31 | +1:30 |

Compressive Strength Performance

| Mixture | psi | 7-Day | | 28-Day | | |
|------------------------------|------|-------|-----|--------|------|-----|
| | | MPa | % | psi | MPa | % |
| Plain | 2360 | 16.3 | 100 | 3320 | 22.9 | 100 |
| PolyHeed 997 admixture @ | | | | | | |
| 5 fl oz/cwt (325 mL/100 kg) | 3060 | 21.1 | 129 | 3930 | 27.1 | 118 |
| 10 fl oz/cwt (650 mL/100 kg) | 3740 | 25.8 | 158 | 4610 | 31.8 | 136 |
| 15 fl oz/cwt (980 mL/100 kg) | 4620 | 31.9 | 196 | 5460 | 37.7 | 165 |

¹Note: 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® 997

Guidelines for Use

Dosage: PolyHeed 997 admixture has a recommended dosage range of 3-15 fl oz /cwt (195-980 mL/100 kg) of cementitious material for most concrete mixes.

As the dosage of PolyHeed 997 admixture increases to 15 fl oz/cwt (980 mL/100 kg) of cementitious materials, normal concrete setting 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 – Non-Chloride, Non-Corrosive: PolyHeed 997 admixture will neither initiate nor promote corrosion of reinforcing or prestressing steel embedded in concrete, or of galvanized steel floor and roof systems. PolyHeed 997 admixture does not contain intentionally added calcium chloride or other chloride-based ingredients.

Compatibility: PolyHeed 997 admixture may be used in combination with any BASF Construction Chemicals admixtures. When used in conjunction with other admixtures, each admixture must be dispensed separately into the concrete mixture.

Storage and Handling

Storage Temperature: If PolyHeed 997 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 997 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 997 admixture has been exceeded.

Packaging

PolyHeed 997 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 997 admixture.

Additional Information

For additional information on PolyHeed 997 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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