



The Chemical Company

POLYHEED® 700R

Pumping and finishing admixture developed for hot climates

DESCRIPTION

POLYHEED 700R is a non-chloride, mid-range water-reducing and retarding admixture which is formulated to produce:

1. true mid-range (5-15%) water reduction and excellent performance across a wide slump range (150-200 mm).
2. extended concrete setting time characteristics throughout the recommended dosage range
3. superior workability, pumpability and finishability qualities even in concrete mixes using low amounts of cementitious materials and/or fly ash mixes
4. strength performance comparable to water-reducing and retarding admixtures at all ages
5. improved performance with a wide range of cements, fly ashes, granulated slags, and aggregates (including coarse and manufactured sands).

POLYHEED 700R has been formulated to meet the requirements of ASTM C494 for Types B and D admixtures, specifically:

- reduced water content for a given slump
- extended setting time characteristics
- increased compressive and flexural strength performance at all ages
- improved concrete durability to damage from freezing and thawing
- reduced shrinkage

POLYHEED 700R is compatible with all cements meeting the recognised international standards.

RECOMMENDED FOR

POLYHEED 700R admixture is recommended for use in all concrete where extended setting time characteristics, and superior workability, pumpability and finishability qualities are desired in hot weather concreting applications.

POLYHEED 700R admixture is particularly useful in providing mid-range slumps in the area of 125-200 mm. Field data has consistently shown improved workability, pumpability and finishability versus conventional water-reducing and retarding admixtures.

As a result of the above advantages, **POLYHEED 700R** admixture will improve pumped and conventionally placed concrete. It may also be used with reinforced and lightweight concrete.

POLYHEED 700R admixture may be used in all coloured and architectural concrete.

FEATURES AND BENEFITS

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| Superior pumpability | Minimises choking of pumps and lines even with harsh mixes. |
| Higher percentage of manufactured sands can be used | More economical. |
| Better cohesion | Reduces segregation. |
| Consistent performance | Excellent concrete quality. |
| Superior finishing | Better surface appearance. |

TYPICAL PERFORMANCE DATA

310 kg of ASTM C150 Type 1 cement per m³, slump 120 mm, non-air-entrained concrete. Concrete temperature 32°C, ambient temperature 32°C.

Setting Time Performance

Mix	Initial Set hr:min	Difference hr:min
Plain	3:44	--

POLYHEED 700R admixture

195 ml/100 kg	3:55	+0:11
390 ml/100 kg	5:22	+1:38
585 ml/100 kg	8:33	+4:49

Compressive Strength Performance

Mix	7 Days		28 Days	
	MPa	%	MPa	%
Plain	19.8	100	28.3	100

POLYHEED 700R admixture

195 ml/100 kg	23.9	120	29.3	111
390 ml/100 kg	25.2	127	31.9	121
585 ml/100 kg	28.5	144	35.9	137

Note: The data shown is 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.

POLYHEED 700R admixture will not initiate or promote corrosion of reinforcing steel in concrete. This admixture does not contain intentionally added calcium

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chloride or chloride-based ingredients. The admixture, due to chlorides originating from all the ingredients used in its manufacture, contributes less than 0.0002% (2.0 PPM. chloride ions by weight of the cement when used at a dosage rate of 65 ml per 100 kg of cement.

APPLICATION

Dispensing

POLYHEED 700R can be added to the concrete with mixing water. When used in conjunction with other admixtures, each admixture must be dispensed separately into the mix.

The addition of **POLYHEED 700R** to a dry mix is not recommended.

Introduce **POLYHEED 700R** at the specified dosage directly into the mixer through a dispenser along with the mixing water, when the concrete is damp (i.e., after 50%-70% of the mixing water has been added). Mix the concrete for at least 3 minutes.

DOSAGE

POLYHEED 700R mid-range water-reducing admixture has a recommended dosage range of 200-800 ml per 100 kg of cementitious materials for most hot weather concrete mixes.

BASF Construction Chemicals does not advise employing dosage rates outside the recommended range without trial testing. Consult a local BASF Construction Chemicals sales representative for assistance in determining the dosage rate for optimum

PACKAGING

POLYHEED 700R admixture is supplied in 205L drums and bulk delivery.

SHELF LIFE

POLYHEED 700R can be stored for 12 months if stored at temperatures above 5°C, in tightly sealed original drums. If found to be frozen, thaw it and reconstitute by stirring.

PRECAUTIONS

Health : **POLYHEED 700R** does not contain any hazardous substances requiring labelling.

It is safe for use with standard precautions followed in the construction industry, such as use of hand gloves, safety goggles, etc.

For detailed Health, Safety and Environmental Recommendations, please consult and follow all instructions on the product Material Safety Data Sheet.

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STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this **BASF Construction Chemicals** publication are based on the present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use.

NOTE

Field service where provided does not constitute supervisory responsibility. Suggestions made by **BASF Construction Chemicals** either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not **BASF Construction Chemicals**, are responsible for carrying out procedures appropriate to a specific application.