



The Chemical Company

POLYHEED® 744R

Water-Reducing and Retarding Admixtures

APPLICATIONS

- Prestressed concrete
- Precast concrete
- Reinforced concrete
- Shotcrete concrete
- Lightweight or standard weight concrete
- Slab on grade
- Pumped concrete

DESCRIPTION

POLYHEED 744 R is a ready-to-use, liquid admixture for the production of more uniform and predictable quality concrete. It meets ASTM C494 requirements for Type A, water-reducing admixtures.

FEATURES

- Reduced water content required for a given workability
- Normal setting characteristics

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- Prestressed concrete

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BENEFITS

- Improve workability
- Reduced segregation
- Superior finishing characteristics for flatwork and cast surfaces
- Increased compressive and flexural strength

PERFORMANCE CHARACTERISTICS

Mix Data: 470 lb/yd³ (359 kg/m³) of Type I cement, 5 in slump (125 mm); non-air entrained concrete; concrete temperature 85°F (29.4°C); ambient temperature 93°F (33.8°C).

Setting time		
Mix Design	Initial Set (h:min)	Difference (h:min)
Plain Concrete	3:20	-
POLYHEED 744 R@		
3 fl oz/cwt (195 ml/100kg)	4:00	+0:40
6 fl oz/cwt (390 ml/100 kg)	5:40	+2:20
9 fl oz/cwt (585 ml/100 kg)	8:45	+5:25

Compressive Strength						
Mix design	7 days			28 days		
	psi	MPa	%	psi	MPa	%
Plain concrete	26100	18.3	100	3730	25.7	100
POLYHEED 744 R @						
3 fl oz/cwt (195 ml/100kg)	2860	19.7	109	4090	28.2	110
6 fl oz/cwt (390 ml/100 kg)	3980	27.4	152	5130	35.4	137
9 fl oz/cwt (585 ml/100 kg)	3980	27.4	152	5690	39.2	153

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.





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Setting time of concrete is influenced by the chemical and physical composition of the basic ingredients of the concrete, temperature of the concrete and climatic conditions. Trial mixes should be made with job site materials to determine the dosage required for specified setting time and a given strength requirement.

GUIDELINES FOR USE

Dosage: POLYHEED® 744 R admixtures is recommended for use within a range of 3-9 fl oz/100 lb (195-585 ml/100kg) of cement for most concrete mixtures using average concrete ingredients. Because of variations in job conditions and concrete materials, dosages other than the recommended amounts may be required. In such case, contact your local BASF Construction Chemicals representative.

PRODUCT NOTES

Corrosivity - Non-Chloride, Non-Corrosive: POLYHEED 744 R admixture will neither initiate nor promote corrosion of reinforcing steel in concrete. This admixture does not contain intentionally-added calcium chloride or other chloride-based ingredients.

Compatibility: POLYHEED 744R admixtures may be used in combination with any BASF Construction Chemicals admixtures. When used in conjunction with other admixtures, each admixtures must be dispensed separately into the mix.

STORAGE AND HANDLING

Storage Temperature: If POLYHEED 744 R admixtures freezes, thaw at temperatures above 35°F (2°C) and completely reconstitute by mild mechanical agitation. Do not use pressurized air for agitation.

Shelf Life: POLYHEED 744 R 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 744 R admixture has been exceeded.

PACKAGING

POLYHEED 744 R admixture is supplied in 55 gal (208 l) drums, 275 gal (1040 l) totes and by bulk delivery.

Related Documents

Material Safety Data Sheet: POLYHEED 744 R admixture.

Additional Information

For additional information on POLYHEED 744 R admixture or its use in developing concrete mixtures with special performance characteristics, contact your local sales representative.

The BASF Construction Chemicals business is a leading provider of innovative additives for specialty concrete used in the ready mix, precast, manufactured concrete products, underground construction and paving markets. The Company's respected Master Builders brand products are used to improve the placing, pumping, finishing, appearance and performance characteristics of concrete.

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Argentina 54-34-8843-3000	Brasil 55-11-2718-5555	Chile 56-2-799-4300	Colombia 57-1-632-2260	Ecuador 593-2-3-979-500	Perú 511-385-0109	Venezuela 58-212-256-0011