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3	03 30 00	Cast-in-Place Concrete
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MASTER® BUILDERS SOLUTIONS

MasterGlenium® 3030

Full-Range Water-Reducing Admixture

Description

MasterGlenium 3030 ready-to-use full-range water-reducing admixture is a patented new generation of admixture based on polycarboxylate chemistry. MasterGlenium 3030 admixture is very effective in producing concretes with different levels of workability including applications that require the use of self-consolidating concrete (SCC). MasterGlenium 3030 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:

- Concrete where high flowability, high-early and ultimate strengths and increased durability are needed
- Self-consolidating concrete
- Concrete where normal, mid-range, or high-range water-reduction is desired
- Concrete where normal setting times are required
- Strength-on-demand concrete, such as 4x4™ Concrete
- Pervious concrete
- Self-consolidating grout

Features

- Dosage flexibility for normal, mid- and high-range water reduction
- Reduced water content for a given slump
- Produces cohesive and non-segregating concrete mixture
- Increased compressive strength and flexural strength performance at all ages
- Providing faster setting times and strength development
- Enhanced finishability and pumpability

Benefits

- Providing economic benefits to the entire construction team through higher productivity and reduced variable costs

Performance Characteristics

The dosage flexibility of MasterGlenium 3030 admixture allows it to be used as a normal, mid-range and high-range water reducer.

Mixture Data: 600 lb/yd^3 of Type I cement (360 kg/m^3); slump, 8.5-9.25 in. (210-235 mm); non-air-entrained concrete; dosage rate adjusted to obtain 25-30% water reduction.

Setting Time

Mixture	Initial Set (h:min)	Difference (h:min)
Plain	4:24	–
Conventional high-range water-reducer	6:00	+ 1.36
MasterGlenium 3030 admixture	5:00	+0.36

Compressive Strength

	1 Day		7 Days	
Mixture	psi	MPa	psi	MPa
Plain	1700	12	4040	28
Conventional high-range water-reducer	3460	24	6380	44
MasterGlenium 3030 admixture	4120	28	7580	52

Slump Retention - in. (mm)

	Minutes		
Mixture	15	30	45
Plain	8.5 (215)	8.5 (215)	7.5 (200)
Conventional high-range water-reducer	8.5 (215)	4.25 (110)	3.5 (90)
MasterGlenium 3030 admixture	9.25 (235)	9.25 (235)	8.25 (210)

Rate of Hardening: MasterGlenium 3030 admixture is formulated to produce normal setting characteristics throughout its recommended dosage range. Setting time of concrete is influenced by the chemical and physical composition of the basic ingredients of the concrete, temperature of the concrete and ambient conditions. Trial mixtures should be made with actual job materials to determine the dosage required for a specified setting time and a given strength requirement.

Guidelines for Use

Dosage: MasterGlenium 3030 admixture has a recommended dosage range of up to 3 fl oz/cwt (195 mL/100 kg) for Type A applications, 3-6 fl oz/cwt (195-390 mL/100 kg) for mid-range use and up to 18 fl oz/cwt (1,170 mL/100 kg) for Type F applications. The dosage range is applicable to most mid- to high-range concrete mixtures using typical concrete ingredients. However, variations in job conditions and concrete materials, such as silica fume, may require dosages outside the recommended range. In such cases, contact your local sales representative.

Mixing: MasterGlenium 3030 admixture can be batched with the initial mixing water or as a delayed addition. However, optimum water reduction is generally obtained with a delayed addition.

Product Notes

Corrosivity – Non-Chloride, Non-Corrosive: MasterGlenium 3030 admixture will neither initiate nor promote corrosion of reinforcing steel embedded in concrete, prestressed concrete or of galvanized steel floor and roof systems. Neither calcium chloride nor other chloride-based ingredients are used in the manufacture of MasterGlenium 3030 admixture.

Compatibility: MasterGlenium 3030 admixture is compatible with most admixtures used in the production of quality concrete, including normal, mid-range and high-range water-reducing admixtures, air-entrainers, accelerators, retarders, extended set control admixtures, corrosion inhibitors, and shrinkage reducers.

Do not use MasterGlenium 3030 admixture with admixtures containing beta-naphthalene-sulfonate. Erratic behaviors in slump, slump flow, and pumpability may be experienced.

For directions on the proper evaluation of MasterGlenium 3030 admixture in specific applications, contact your local sales representative.

Storage and Handling

Storage Temperature: MasterGlenium 3030 admixture should be stored above freezing temperatures. If MasterGlenium 3030 admixture freezes, thaw at 45 °F (7 °C) or above and completely reconstitute by mild mechanical agitation. **Do not use pressurized air for agitation**.

Shelf Life: MasterGlenium 3030 admixture has a minimum shelf life of 12 months. Depending on storage conditions, the shelf life may be greater than stated. Please contact your local sales representative regarding suitability for use and dosage recommendations if the shelf life of MasterGlenium 3030 admixture has been exceeded.

Packaging

MasterGlenium 3030 admixture is supplied in 55 gal (208 L) drums, 275 gal (1040 L) totes and by bulk delivery.

Related Documents

Safety Data Sheets: MasterGlenium 3030 admixture

Additional Information

For additional information on MasterGlenium 3030 admixture or its use in developing concrete mixes with special performance characteristics, contact your local sales representative.

Master Builders Solutions, a brand of MBCC Group, is a global leader of innovative chemistry systems and formulations for construction, maintenance, repair and restoration of structures. The Admixture Systems business provides advanced products, solutions and expertise that improve durability, water resistance, energy efficiency, safety, sustainability and aesthetics of concrete structures, above and below ground, helping customers to achieve reduced operating costs, improved efficiency and enhanced finished products.

Utilizing worldwide resources, the Master Builders Solutions community of experts are passionate about providing solutions to challenges within all stages of construction, as well as the life cycle of a structure. At Master Builders Solutions we create sustainable solutions for construction around the globe.

Limited Warranty Notice

Master Builders Solutions Admixtures US, LLC (“Master Builders Solutions”) warrants this product to be free from manufacturing defects and to meet the technical properties on the current Technical Data Guide, if used as directed within shelf life. Satisfactory results depend not only on quality products but also upon many factors beyond our control. MASTER BUILDERS SOLUTIONS MAKES NO OTHER WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ITS PRODUCTS. The sole and exclusive remedy of Purchaser for any claim concerning this product, including but not limited to, claims alleging breach of warranty, negligence, strict liability or otherwise, is shipment to purchaser of product equal to the amount of product that fails to meet this warranty or refund of the original purchase price of product that fails to meet this warranty, at the sole option of Master Builders Solutions. Any claims concerning this product must be received in writing within one (1) year from the date of shipment and any claims not presented within that period are waived by Purchaser. MASTER BUILDERS SOLUTIONS WILL NOT BE RESPONSIBLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFITS) OR PUNITIVE DAMAGES OF ANY KIND.

Purchaser must determine the suitability of the products for the intended use and assumes all risks and liabilities in connection therewith. This information and all further technical advice are based on Master Builders Solutions' present knowledge and experience. However, Master Builders Solutions assumes no liability for providing such information and advice including the extent to which such information and advice may relate to existing third party intellectual property rights, especially patent rights, nor shall any legal relationship be created by or arise from the provision of such information and advice. Master Builders Solutions reserves the right to make any changes according to technological progress or further developments. The Purchaser of the Product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with a full application of the product(s). Performance of the product described herein should be verified by testing and carried out by qualified experts.

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MasterAir® AE 90

Air-Entraining Admixture

Description

MasterAir AE 90 air-entraining admixture is for use in concrete mixtures. It meets the requirements of ASTM C 260, AASHTO M 154 and CRD-C 13.

Applications

Recommended for use in:

- Concrete exposed to cyclic freezing and thawing
- Production of high-quality normal or lightweight concrete (heavyweight concrete normally does not contain entrained air)

Features

- Ready-to-use in the proper concentration for rapid, accurate dispensing

Benefits

- Improved resistance to damage from cyclic freezing and thawing
- Improved resistance to scaling from deicing salts
- Improved plasticity and workability
- Reduced permeability – increased watertightness
- Reduced segregation and bleeding

Performance Characteristics

Concrete durability research has established that the best protection for concrete from the adverse effects of freezing and thawing cycles and deicing salts results from: proper air content in the hardened concrete, a suitable air-void system in terms of bubble size and spacing, and adequate concrete strength, assuming the use of sound aggregates and proper mixing, transporting, placing, consolidation, finishing and curing techniques. MasterAir AE 90 admixture can be used to obtain adequate freeze-thaw durability in a properly proportioned concrete mixture, if standard industry practices are followed.

Air Content Determination: The total air content of normal weight concrete should be measured in strict accordance with ASTM C 231, “Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method” or ASTM C 173/C 173M, “Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method.” The air content of lightweight concrete should only be determined using the Volumetric Method. The air content should be verified by calculating the gravimetric air content in accordance with ASTM C 138/C 138M, “Standard Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete.” If the total air content, as measured by the Pressure Method or Volumetric Method and as verified by the Gravimetric Method, deviates by more than 1.5%, the cause should be determined and corrected through equipment calibration or by whatever process is deemed necessary.

Guidelines for Use

Dosage: There is no standard dosage for MasterAir AE 90 admixture. The exact quantity of air-entraining admixture needed for a given air content of concrete varies because of differences in concrete-making materials and ambient conditions. Typical factors that might influence the amount of air entrained include: temperature, cementitious materials, sand gradation, sand-aggregate ratio, mixture proportions, slump, means of conveying and placement, consolidation and finishing technique. The amount of MasterAir AE 90 admixture used will depend upon the amount of entrained air required under actual job conditions. In a trial mixture, use 0.25 to 4 fl oz/cwt (16-260 mL/100 kg) of cementitious material. Measure the air content of the trial mixture, and, if needed, either increase or decrease the quantity of MasterAir AE 90 admixture to obtain the desired air content.

In mixtures containing water-reducing or set-control admixtures, the amount of MasterAir AE 90 admixture needed may be somewhat less than the amount required in plain concrete.

Due to possible changes in the factors that can affect the dosage of MasterAir AE 90 admixture, frequent air content checks should be made during the course of the work. Adjustments to the dosage should be based on the amount of entrained air required in the mixture at the point of placement.

If an unusually high or low dosage of MasterAir AE 90 admixture is required to obtain the desired air content, consult your local sales representative. In such cases, it may be necessary to determine that, in addition to a proper air content in the fresh concrete, a suitable air-void system is achieved in the hardened concrete.

Dispensing and Mixing: Add MasterAir AE 90 admixture to the concrete mixture using a dispenser designed for air-entraining admixtures, or add manually using a suitable measuring device that ensures accuracy within plus or minus 3% of the required amount.

For optimum, consistent performance, the air-entraining admixture should be dispensed on damp, fine aggregate. If the concrete mixture contains fine lightweight aggregate, field evaluations should be conducted to determine the best method to dispense the air-entraining admixture.

Precaution

In a 2005 publication from the Portland Cement Association (PCA R&D Serial No. 2789), it was reported that problematic air-void clustering that can potentially lead to above normal decreases in strength was found to coincide with late additions of water to air-entrained concretes. Late additions of water include the conventional practice of holding back water during batching for addition at the jobsite. Therefore, caution should be exercised with delayed additions of water to air-entrained concrete. Furthermore, an air content check should be performed after post-batching addition of any other materials to an air-entrained concrete mixture.

Product Notes

Corrosivity – Non-Chloride, Non-Corrosive: MasterAir AE 90 admixture will neither initiate nor promote corrosion of reinforcing and prestressing steel embedded in concrete, or of galvanized floor and roof systems. No calcium chloride or other chloride-based ingredients are used in the manufacture of this admixture.

Compatibility: MasterAir AE 90 admixture may be used in combination with any Master Builders Solutions admixture, unless stated otherwise on the data sheet for the other product. When used in conjunction with other admixtures, each admixture must be dispensed separately into the concrete mixture.

Storage and Handling

Storage Temperature: MasterAir AE 90 admixture should be stored and dispensed at 31 °F (-0.5 °C) or higher. Although freezing does not harm this product, precautions should be taken to protect it from freezing. If MasterAir AE 90 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: MasterAir AE 90 admixture has a minimum shelf life of 18 months. Depending on storage conditions, the shelf life may be greater than stated. Please contact your local sales representative regarding suitability for use and dosage recommendations if the shelf life of MasterAir AE 90 admixture has been exceeded.

Safety: Chemical goggles and gloves are recommended when transferring or handling this material.

Packaging

MasterAir AE 90 admixture is supplied in 55 gal (208 L) drums, 275 gal (1040 L) totes and by bulk delivery.

Related Documents

Safety Data Sheets: MasterAir AE 90 admixture

Additional Information

For additional information on MasterAir AE 90 admixture, or its use in developing a concrete mixture with special performance characteristics, contact your local sales representative.

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3 03 30 00 Cast-in-Place Concrete
4 03 40 00 Precast Concrete
04 22 00 Concrete Unit Masonry

MASTER® BUILDERS SOLUTIONS

MasterPel® 235

Water-Repellent Admixture

Description

MasterPel 235 admixture is formulated for use in ready-mixed and precast concrete, as well as for other applications, such as concrete masonry. MasterPel 235 admixture imparts moisture penetration resistance in concrete and concrete products by making the pores and pore linings less prone to water ingress. As a result, water absorption and capillary "wicking" of moisture into the concrete is greatly reduced.

Applications

Recommended for use in

- Slabs-on-ground
- Foundation walls
- Exterior walls
- Swimming pools
- Columns
- Wall panels
- Architectural units and other precast products which will be exposed to moisture in service
- Concrete Masonry

Features

- Reduced rate of water absorption
- Reduced water vapor transmission
- Reduced efflorescence potential

Benefits

- Provides lasting protection from moisture damage
- Resists capillary uptake of moisture beneath floor slabs

Performance Characteristics

MasterPel 235 admixture has undergone extensive testing to examine its overall performance in concrete. These tests include the following:

- ASTM C 39/C 39M Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
- ASTM C 140/C 140M Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units
- ASTM C 157/C 157M Standard Test Method for Length Change of Hardened Hydraulic-Cement, Mortar, and Concrete
- ASTM C 403/C 403M Standard Test Method for Time of Setting of Concrete Mixtures by Penetration Resistance
- ASTM C 642 Standard Test Method for Density, Absorption, and Voids in Hardened Concrete
- ASTM C 779/C 779M Standard Test Method for Abrasion Resistance of Horizontal Concrete Surfaces
- ASTM C 952 Standard Test Method for Bond Strength of Mortar to Masonry Units
- Wiss, Janney, Elstner Method: Adsorption/Water Vapor Transmission

Note: The most critical of these test procedures in substantiating water repellency are: ASTM C 642 and the Wiss, Janney, Elstner method of determining absorption and water vapor transmission.

Guidelines for Use

Dosage: MasterPel 235 admixture is recommended within the dosage range of 2-10 fl oz/ cwt (130-650 mL/100 kg) of cement, depending on the mixture proportions, and level of water repellency desired. It is also recommended that the water-cementitious materials ratio be limited to a maximum of 0.50. Please consult your local sales representative to obtain dosage rate recommendations.

Product Notes

MasterPel 235 admixture will not compensate for flaws in building design, materials, mixture proportions or workmanship. It is recommended that a producer run trial batches with MasterPel 235 admixture and conduct the appropriate tests to determine optimum dosage for a given set of materials. Slight adjustments to the mixture proportions may be necessary to obtain maximum water-repellency. Master Builders Solutions is not responsible for inappropriate use of MasterPel 235 admixture. Your local sales representative can provide assistance if requested.

For concrete exposed to hydrostatic pressure, the volume of capillary pore space must also be reduced by lowering the water-cementitious materials ratio, and if necessary, by adding silica fume, and/or fly ash, to the concrete mixture. The use of a water-reducing admixture, such as MasterPozzolith®, MasterPolyHeed®, MasterRheobuild® or MasterGlenium® admixture in conjunction with MasterPel 235 admixture will be required.

MasterPel 235 admixture is not recommended for use in concrete that will be exposed to freezing and thawing cycles without adequate air entrainment.

Corrosivity – Non-Chloride, Non-Corrosive: This 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.

Storage and Handling

Storage Temperature: MasterPel 235 admixture must be stored at temperatures above 40 ºF (4 ºC) and below 105 ºF (42 ºC). MasterPel 235 admixture should not be used after it freezes.

Shelf Life: MasterPel 235 admixture has a minimum shelf life of 6 months. Depending on storage conditions, the shelf life may be greater than stated. Please contact your local sales representative regarding suitability for use and dosage recommendations if the shelf life of MasterPel 235 admixture has been exceeded.

Packaging

MasterPel 235 admixture is supplied in 55 gal (208 L) drums, 275 gal (1041 L) totes and by bulk delivery.

Related Documents

Safety Data Sheets: MasterPel 235 admixture

Additional Information

For additional information on MasterPel 235 admixture or its use in developing concrete mixtures with special performance characteristics, contact your local sales representative.

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Master X-Seed 100

Hardening accelerating admixture for concrete - EN 934-2: T7

DESCRIPTION

Master X-Seed 100 is an engineered suspension of crystal seeds containing nanoparticles, designed to boost the hydration process of early age cement (6-12 hrs). Based on unique and innovative seeding technology, the growth of the essential Calcium Silicate Hydrate crystals is strongly accelerated.

Master X-Seed 100 promotes concrete hardening at low, ambient and even heat curing temperatures. Unlike traditional acceleration methods and thanks to the unique mode of action - the virtually barrier-free crystal growth of the seeds in between the cement grains - early strength development is accelerated while the final microstructure benefits from equivalent or improved properties.

CRYSTAL SPEED HARDENING

Master X-Seed 100 is the essential component of our Crystal Speed Hardening concept.

Crystal Speed Hardening expresses the Value Proposition offered by the unique crystal seeding technology of Master X-Seed:

- Efficient Processes
- Energy Reduction
- Material Optimization
- High Quality Specifications

The concept addresses key industry requirements and has the power to exceed all current solutions. In particular, the concept is designed to make a significant contribution to meeting sustainable construction targets.

FIELDS OF APPLICATION

Master X-Seed 100 is optimized for all kinds of concretes, especially for structural precast elements where high early strength development is a key success factor for the producer. Master X-Seed 100 is a relevant alternative to heat curing methods and the strong promotion of hydration in particular supports the use of binders with lower clinker content.

FEATURES AND BENEFITS

Master X-Seed 100 offers the following benefits:

- Early strength acceleration at low, ambient and heat curing temperatures
- Flexible adjustment of production capacities
- Increased production cycles (double, triple rotation)
- Better use of formwork by earlier demoulding
- Reduction/elimination of heat curing
- Reduced investment and running cost of curing
- Allows use of minimum required cement quantities
- Allows binder optimization by using lower grade, less clinker-containing cements or by increasing use of supplementary cementitious materials (Limestone, Fly Ash, Slag)
- Lower risk of delayed ettringite formation
- Reduced water absorption
- Improved concrete durability aspects
- Improved plant and product ECO-efficiency by reducing CO_2 emissions

DOSAGE

The normally recommended dosage rate of Master X-Seed 100 is approximately:

- *By Volume* - 0.44 to 5.29 litres per 100 kg of cement (binder) content.
- *By Weight* - 0.50 to 6.00 kg per 100 kg of cement (binder) content.

The dosage rates given above are for typical usages, they are not meant as absolute limits, as other dosages may be utilised in special cases according to specific job conditions. If required consult our Technical Services Department for advice. Trial mixes should be carried out to ensure optimum dosage and effect.

MIXING

Master X-Seed 100 is a ready-to-use liquid admixture to be added to the concrete during the mixing process. Enough mixing time to secure homogeneous dispersion should be provided.

COMPATIBILITY

Master X-Seed 100 can be used with all types of EN 197 Cements. For use with other special cements, contact our Technical Services Department.

Master X-Seed 100

Hardening accelerating admixture for concrete - EN 934-2: T7

Master X-Seed 100 should not be pre-mixed with other admixtures. If other admixtures are to be used in concrete containing Master X-Seed 100 they must be dispensed separately.

Master X-Seed 100 is compatible with all our core technologies such as ZERO ENERGY SYSTEM and SMART DYNAMIC CONCRETE, in particular with

- MasterGlenium type superplastisizers for high fluidification power
- MasterMatrix viscosity modifying agents for robust self-compacting concrete
- MasterAir air entraining agents for improved freeze-thaw resistance
- MasterFinish form release agents for easy formwork removal & aesthetic surface finish.

PACKAGING

Master X-Seed 100 is supplied in Bulk, 1000-litre IBC's and 15-litre containers.

CONTACT DETAILS

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Master X-Seed 100

Hardening accelerating admixture for concrete - EN 934-2: T7

Product Data	
Appearance:	White liquid
Specific gravity @ 20°C:	1.135 ± 0.03 g/cm³
pH-value:	11.0 ± 1
Alkali content (%):	≤ 4.00 by mass
Chloride content (%):	≤ 0.10 by mass
Corrosion behaviour:	Contains only components according to BS EN 934-1:2008, Annex A.1 & declared list A.2.
Air Content:	Fulfilled
Setting time – initial @ 5°C:	≤ 60% of Reference mix
Setting time – initial @ 20°C:	≥ 30 minutes
Compressive strength:	Fulfilled
Durability:	NPD
Dangerous substances:	NPD
Logistics	
Shelf life:	6 months if stored according to manufacturer's instructions in unopened container.
Storage conditions:	Store in original sealed containers and at temperatures between 5°C and 30°C. Store under cover, out of direct sunlight and protect from extremes of temperature. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging.
Handling and transportation:	Refer to Master X-Seed 100 Safety Data Sheet
Disposal:	Refer to Master X-Seed 100 Safety Data Sheet

UK CA 0086-CPR-469071 CE 1073-CPR-7420

EN 934-2: T6 & T7

Declaration of Performance can be found at www.master-builders-solutions.com/en-gb

Master X-Seed 100

Hardening accelerating admixture for concrete - EN 934-2: T7

Health and Safety
*For full information on Health and Safety matters regarding this product the relevant Health and Safety Data Sheet should be consulted.

The following general comments apply to all products.

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs, (which may also be tainted with vapour until the product is fully cured and dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Keep away from children and animals. Reseal containers after use.

Spillage
Chemical products can cause damage; clean spillage immediately.

DISCLAIMER
“Master Builders Solutions UK Ltd" (the Company) endeavours to ensure that advice and information given in Product Data Sheets, Method Statements and Material Safety Data Sheets (all known as Product Literature) is accurate and correct. However, the Company has no control over the selection of its products for particular applications. It is important that any prospective customer, user or specifier, satisfies him/her-self that the product is suitable for the specific application. In this process, due regard should be taken of the nature and composition of the background/base and the ambient conditions both at the time of laying/applying/installing the material and when the completed work is to be brought into use.

Accordingly, no liability will be accepted by the Company for the selection, by others, of a product, which is inappropriate to a particular application.

Products are sold subject to the Company's standard conditions of sale and all customers, users and specifiers, should ensure that they examine the Company's latest Product Literature.

We create chemistry

3 | 03 30 00 Concreto colado in situ
03 40 00 Concreto prefabricado
03 70 00 Concreto masivo

MasterPolyheed 844R

Mid-Range Water Reducing and Retarding Admixture

POLYHEED 844R

DESCRIPTION

MasterPolyheed 844R admixture is a multicomponent, chloride free, mid-range waterreducing admixture, formulated to produce:

- A mid range water reduction (5 a 15%) an excellent performance through a wide range of mid-range slump, particularly in 150 a 200 mm slump in concrete placement
- Extended setting time throughout the recommended dosage
- Improved workability, pumpability and finishability, even in concrete mixes containing reduced amount of cementitious materials and/or concrete mixes containing fl y ashes
- Development of comparable compressive strength to that of the water-reducing and retarding admixtures
- Better performance with wide range types of cements, fly ashes, slag and aggregates

MasterPolyheed 844R admixture meets ASTM C 494 for retarding Type A admixtures, Type B for water- reducing admixture and Type D for waterreducing and retarding admixtures.

RECOMMENDED USE

All concrete where extended setting characteristics, and superior workability, and finishability qualities are desire, particularly in hot weather. MasterPolyheed 844R can be used for architectonic or colored concrete.

MasterPolyheed 844R can be used with airentraining, as long as it meets ASTM, AASHTO and CRD specifi cations.

FEATURES

- Reduces water content for a given slump
- Improved time setting features
- Increased development of compressive and flexural strengths

BENEFITS

MasterPolyheed 844R helps produce a quality concrete with the following special benefi ts:

- Superior workability and pumpability in worm weather applications
- Reduced bleeding and slump
- Improves finishability in flat, formed or extruded surfaces.
- Consistent performance in concrete mixes with low, mid-range of 150 to 200mm and high concrete slumps.

MasterPolyheed 844R is effective used by itself or as part of an admixture systems of BASF Construction Chemicals.

PERFORMANCE CHARACTERISTICS

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.

Setting time

Concrete Mix	Initial setting (Hrs:Mins)	Difference (Hrs:Mins)
Nomal	2:40	
MasterPolyheed 844R		
400 ml/100 kg	3:50	+1:10
600 ml/100 kg	5:15	+2:35

Compresssive Strength

Concrete Mix	7 days		28 days	
	MPa	%	MPa	%
Nomal	15.1	100	21.6	100
MasterPolyheed 844R				
400 ml/100 kg	21.6	143	27.9	129
600 ml/100 kg	25.1	166	32.8	152

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.

MASTER® BUILDERS SOLUTIONS

Performance characteristics and mixture data

325 kg of Type I cement by m^3, slump 165.0 mm, non-air-entrained concrete, concrete temperature 30°C, ambient temperature 32°C.

Dosage

MasterPolyheed 844R mid-range water-reducing admixture has a recommended dosage range of 350 a 900 ml / 100 kg of cementitious material for most concrete mixtures. 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.

Non-Chloride, Non-Corrosive:

MasterPolyheed 844R is a mid-range water-reducing and will neither initiate nor promote corrosion of reinforcing and prestressing steel embedded in concrete, or of galvanized steel fl oor and roof systems. Neither calcium chloride nor other chloride-based ingredients are used in the manufacture of MasterPolyheed 844R.

PACKAGING

MasterPolyheed 844R is supplied in 208L drums, 1040L totes and by bulk delivery.

STORAGE

MasterPolyheed 844R admixture has a minimum shelf life of 12 months, if maintained in original sealed packaging, stored under dry and fresh area. Avoid storing directly under the sun or in high temperatures.

SAFETY

See the Material Safety Data Sheet of this product, or contact your local BASF sales representative.

The aforesaid information represents the best of our knowledge and is not based solely on the lab work but also on the experience in the fi eld.

However, given the different factors that affect the results, we provide this information without warranty and without assuming any manifested liability.

Additional Information

For additional information on MasterPolyheed 844R admixture or its use in developing concrete mixtures with special performance characteristics, contact your local sales representative.

The Admixture Systems business of BASF's Construction Chemicals division is the leading provider of solutions that improve placement, pumping, finishing, appearance and performance characteristics of specialty concrete used in the ready-mixed, precast, manufactured concrete products, underground construction and paving markets. For over 100 years we have offered reliable products and innovative technologies, and through the Master Builders Solutions brand, we are connected globally with experts from many fields to provide sustainable solutions for the construction industry.

Limited Warranty Notice

BASF warrants this product to be free from manufacturing defects and to meet the technical properties on the current Technical Data Guide, if used as directed within shelf life. Satisfactory results depend not only on quality products but also upon many factors beyond our control. BASF MAKES NO OTHER WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ITS PRODUCTS. The sole and exclusive remedy of Purchaser for any claim concerning this product, including but not limited to, claims alleging breach of warranty, negligence, strict liability or otherwise, is shipment to purchaser of product equal to the amount of product that fails to meet this warranty or refund of the original purchase price of product that fails to meet this warranty, at the sole option of BASF. Any claims concerning this product must be received in writing within one (1) year from the date of shipment and any claims not presented within that period are waived by Purchaser. BASF WILL NOT BE RESPONSIBLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFITS) OR PUNITIVE DAMAGES OF ANY KIND.Purchaser must determine the suitability of the products for the intended use and assumes all risks and liabilities in connection therewith. This information and all further technical advice are based on BASF's present knowledge and experience. However, BASF assumes no liability for providing such information and advice including the extent to which such information and advice may relate to existing third party intellectual property rights, especially patent rights, nor shall any legal relationship be created by or arise from the provision of such information and advice. BASF reserves the right to make any changes according to technological progress or further developments. The Purchaser of the Product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with a full application of the product(s). Performance of the product described herein should be verified by testing and carried out by qualified experts.

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