

MIRA[®] P90

Mid-range water-reducing admixture

Product Description

MIRA[®]P90 is a mid-range water-reducing admixture specifically formulated to produce concrete with improved strength and placement characteristics. Effective through a wide dosage range, MIRA[®]P90 combines the benefits and performance of normal and high range water-reducing admixtures by producing concrete with lower water to cement ratio and enhanced cement hydration performance. MIRA[®]P90 is ideally suitable for all concrete grades while exhibiting neutral setting time properties.

MIRA[®]P90 is an aqueous solution of complex organic compounds, each of which contributes uniquely to the concrete's plastic and final strength properties. It is manufactured under rigid controls which provide uniform, predictable performance. MIRA[®]P90 does not contain calcium chloride. MIRA[®]P90 is supplied as a green, low viscosity liquid. One litre weighs approximately 1.060kg ± 0.02kg.

Uses

MIRA[®]P90 provides concrete with lower water content for improved strength properties. Placement characteristics can be enhanced with moderate changes to dose rate levels. It yields a less permeable and more durable concrete. MIRA[®]P90 is used in pre-mixed, precast, job site and concrete paving plants for normal and light weight concrete. Designed to perform best in lean and mid-strength concrete grades (20 - 50MPa), it is most suited for flatwork and general concrete applications. MIRA[®]P90 is particularly effective in mixes containing fly ash and slag-compensated materials supplementary cementitious materials.

Product Advantages

- Superior strength performance
- Increased workability, thereby allowing easier placement
- Improved cement hydration
- Better mix design flexibility
- Ideal for low shrinkage concrete
- Neutral setting characteristics

Addition Rates

The addition rate range of MIRA[®]P90 is typically 200 to 1,000mL / 100kg total cementitious. General dose rate range of 300 to 600mL / 100kg total cementitious will meet most job requirements. Optimum addition depends on concrete mixture components, job conditions and desired performance characteristics.

Compatibility with Other Admixtures

MIRA[®]P90 is compatible with most admixtures from GCP Applied Technologies. Due to the synergistic effect of MIRA[®] and air entraining agents, these admixtures should be pre-tested prior to construction work to confirm air entrainment levels. MIRA[®]P90 is compatible with admixture brands ADVA[®], WRDA[®] and DARATARD[®] from GCP Applied Technologies, but is specifically not compatible with DARACEM[®], DARACEM[®] 19A, and DAREX[®] Super 20, or admixtures containing Naphthalene Sulphonates. When combining compatible admixtures, each admixture must be added to the concrete mix separately

Health and Safety

See MIRA[®]P90 Material Safety data sheet or consult GCP Applied Technologies.



Advantages

MIRA[®]P90 offers significant advantages over conventional water-reducing admixtures. Laboratory and field work has consistently demonstrated:

Superior Strength Performance

The water reduction properties of up to 15%, and dispersion characteristics allow the production of lower water to cement ratio concrete and more complete hydration of cementitious materials. The combined effect is an increase in compressive and flexural strengths at all ages.

Increased Workability Range

Exceptional water-reducing capabilities allow for concrete production at higher slumps with better water retention and cohesiveness. This provides a less sticky concrete with improved placement in flatwork without the need to add water on site. MIRA[®]P90 allows for concrete to be designed and produced with a wide slump range, typically between 60mm and 160mm for most applications. This allows for ease of placement for lean and mid-strength concrete mix designs.

Neutral Setting Characteristics

MIRA[®]P90 provides controlled setting characteristics throughout a wide dose rate range. This allows for increased workability without extending concrete set times in normal conditions. This product flexibility allows addition rates to suit specific job requirements and weather conditions.

Dispensing Equipment

Please contact your local GCP representative for further information regarding the dispensing equipment for this product.

Packaging

MIRA[®]P90 is available in bulk or 205L drums. MIRA[®]P90 contains no flammable ingredients. It will freeze at approximately -5°C but will return to full strength after thawing and thorough mechanical agitation.

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