

# MIRA<sup>®</sup> VL12

Mid-range water reducer with superior slump life retention

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## Product Description

MIRA<sup>®</sup>VL12 is an aqueous solution of complex polycarboxylate compounds which contribute uniquely to concrete's final properties of strength and durability. Concrete made with MIRA<sup>®</sup>VL12 will display significant performance advantages over concrete using traditional admixtures. MIRA<sup>®</sup>VL12 uses the latest innovation in polymer technology to produce minimal slump loss. MIRA<sup>®</sup>VL12 meets all requirements of AS 1478 -2000 as type MWR.

MIRA<sup>®</sup>VL12 is manufactured under rigid controls to ensure uniform and predictable performance. One litre weighs approximately 1.050kg ± 0.02kg.

MIRA<sup>®</sup>VL12 is a Mid-range Water-reducing Admixture (MWR) designed to improve concrete quality by providing extended slump life (slump retention) for critical pre-mixed and precast applications. Ideal for use in mid-strength concrete grades (25 to 50MPa), where extended concrete workability is required for critical placement requiring slump life of 120 - 240 minutes. MIRA<sup>®</sup>VL12 is part of the revolutionary MIRA<sup>®</sup>V series of admixtures from GCP Applied Technologies that combines the benefits of placement flexibility and durability in the performance of concrete.

## Applications

MIRA<sup>®</sup>VL12 allows concrete placement with lower water content to achieve improved placement and enhanced durability. With superior dispersion performance and longer life, MIRA<sup>®</sup>VL12 is recommended for all types of normal and special class concrete applications including:

- Requiring minimal slump loss
- Concrete containing fibres
- Mixes containing SCM (Supplementary Cementitious Materials)
- Green concrete
- Pumped concrete and concrete used in tight locations
- Precast concrete
- Concrete where less manpower is available for placement

MIRA<sup>®</sup>VL12 is used in both premix and precast applications. In flatwork concrete, combined with a well balanced mix, finishing time and quality is improved with tight surface closure and overall improved surface texture. MIRA<sup>®</sup>VL12 is an effective admixture for use with supplementary cementitious materials for improved sustainability.

## Product Advantages

- Long slump life at normal set
- No additional retardation
- Superior strength performance
- Reduced placement effort
- Superior pumpability
- High workability

## Addition Rate

Addition rates of MIRA<sup>®</sup>VL12 is typically 400 to 600mL / 100kg cementitious material. MIRA<sup>®</sup>VL12 is effective through a wide range of dose rates to provide control in concrete placement and finishing times. Higher dose rates can be selected depending on the mix components and job conditions. At lower dose rates, MIRA<sup>®</sup>VL12 will be effective as a Type WR water reducer. Please consult with your local GCP representative.

## Compatibility with Other Admixtures

MIRA<sup>®</sup>VL12, when used in combination with an air-entraining admixture, can have a synergistic effect and increase the air void content slightly. It is recommended that pre-construction trials are undertaken to achieve the specified air content.

MIRA<sup>®</sup>VL12 can be used in conjunction with the WRDA<sup>®</sup>“P” series admixtures and ADVA<sup>®</sup> range of high range water reducers from GCP Applied Technologies, but not including DAREX<sup>®</sup>Super 20, DARACEM<sup>®</sup> or DARACEM<sup>®</sup> 19A. When using admixtures in combination, each admixture should be added separately to the mix.

## Dispensing Equipment

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



## Features and Benefits

MIRA<sup>®</sup>VL12 offers significant advantages over conventional concrete admixtures:

### Minimum Slump Loss

Excellent mid-range water-reducing capabilities allow for concrete production with higher slumps and longer working life (up to 3 hours depending on mix contents and ambient temperatures) with better overall mix cohesiveness, providing less “sticky” concrete for improved placement of concrete.

### Controlled Set Times

Longer placement time with no impact on setting times throughout the dose rate range. Increases slump without delaying concrete setting times.

### Superior Strength Performance

The enhanced water reduction and dispersion characteristics allow the production of lower water-cement ratio concrete with more complete hydration. The combined effect is increased compressive and flexural strengths at all ages.

### Overall Improved Quality of Concrete

Less water in the mix will result in improved overall mix characteristics and can result in lower shrinkage (less potential to crack) and improved abrasion resistance on the surface of the concrete.

## Packaging and Storage

MIRA<sup>®</sup>VL12 is available in bulk and 205L drums. MIRA<sup>®</sup>VL12 contains no flammable ingredients. It will freeze at 0°C but will return to full strength after thawing and thorough mechanical agitation.

## Health and Safety

MIRA<sup>®</sup>VL12 is a non-hazardous chemical. Please refer to the Material Safety Data Sheet or consult GCP Applied Technologies.

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