

MIRA[®] VL12

Mid-range water reducer with superior slump life retention

Product Description

MIRA[®]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[®]VL12 will display significant performance advantages over concrete using traditional admixtures. MIRA[®]VL12 uses the latest innovation in polymer technology to produce minimal slump loss. MIRA[®]VL12 meets all requirements of AS 1478 -2000 as type MWR.

MIRA[®]VL12 is manufactured under rigid controls to ensure uniform and predictable performance. One litre weighs approximately 1.050kg ± 0.02kg.

MIRA[®]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[®]VL12 is part of the revolutionary MIRA[®]V series of admixtures from GCP Applied Technologies that combines the benefits of placement flexibility and durability in the performance of concrete.

Applications

MIRA[®]VL12 allows concrete placement with lower water content to achieve improved placement and enhanced durability. With superior dispersion performance and longer life, MIRA[®]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[®]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[®]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®VL12 is typically 400 to 600mL / 100kg cementitious material. MIRA®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®VL12 will be effective as a Type WR water reducer. Please consult with your local GCP representative.

Compatibility with Other Admixtures

MIRA®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®VL12 can be used in conjunction with the WRDA®“P” series admixtures and ADVA®range of high range water reducers from GCP Applied Technologies, but not including DAREX®Super 20, DARACEM®or DARACEM® 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®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®VL12 is available in bulk and 205L drums. MIRA®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®VL12 is a non-hazardous chemical. Please refer to the Material Safety Data Sheet or consult GCP Applied Technologies.

gcpat.com.au | Australia customer service: 1800 855 525

Australia 1800 855 525 New Zealand +64 9 448 1146 China Mainland +86 21 3158 2888 Hong Kong +852 2675 7898 India: Chennai +91 44 6624 2308 Delhi +91 124 402 8923 Indonesia +62 21 893 4260 Japan +81 3 5226 0231 Korea +82 32 820 0800 Malaysia +60 3 9074 6133 Philippines +63 49 549 7373 Singapore +65 6265 3033 Thailand +66 2 709 4470 Vietnam +84 8 3710 6168

We hope the information here will be helpful. It is based on data and knowledge considered to be true and accurate, and is offered for consideration, investigation and verification by the user, but we do not warrant the results to be obtained. Please read all statements, recommendations, and suggestions in conjunction with our conditions of sale, which apply to all goods supplied by us. No statement, recommendation, or suggestion is intended for any use that would infringe any patent, copyright, or other third party right.

MIRA, WRDA, ADVA, DAREX, and DARACEM are trademarks, which may be registered in the United States and/or other countries, of GCP Applied Technologies, Inc. This trademark list has been compiled using available published information as of the publication date and may not accurately reflect current trademark ownership or status.

© Copyright 2018 GCP Applied Technologies, Inc. All rights reserved.

GCP Applied Technologies Inc., 2325 Lakeview Parkway, Alpharetta, GA 30009, USA

GCP Australia Pty. Ltd., 14 Colebard Street West, Archerfield, Brisbane, Queensland 4108, Australia

This document is only current as of the last updated date stated below and is valid only for use in Australia. It is important that you always refer to the currently available information at the URL below to provide the most current product information at the time of use. Additional literature such as Contractor Manuals, Technical Bulletins, Detail Drawings and detailing recommendations and other relevant documents are also available on www.gcpat.com.au. Information found on other websites must not be relied upon, as they may not be up-to-date or applicable to the conditions in your location and we do not accept any responsibility for their content. If there are any conflicts or if you need more information, please contact GCP Customer Service.

Last Updated: 2023-07-06

gcpat.com.au/solutions/products/mira-mid-range-water-reducers/mira-vl12