

WRDA[®] 51

Water-reducing admixture

Product Description

WRDA[®]51 is an aqueous solution of modified lignosulfonates containing a catalyst which promotes more complete hydration of portland cement. It does not contain calcium chloride. WRDA[®]51 is manufactured under rigid control which provides uniform, predictable performance.

WRDA[®]51 is a chemical admixture meeting the requirements of the following chemical admixture specification for concrete: GB 8076-1997.

One litre weighs approximately 1.09kg ± 0.02kg.

Applications

WRDA[®]51 makes a workable mix with up to 15% less water and yields a stronger, less permeable and more durable concrete. It is used in ready mix plants, job site plants and concrete pavers, for normal weight and light weight concrete, in block, precast and prestressed concrete plants.

Compared to other water reducers, WRDA[®]51 will typically impart the following additional benefits:

- More controlled set time (minimal retardation over a wide range of dosages)
- Higher ultimate compressive and flexural strengths
- Improved workability

Chemical Action

As a dispersing agent, WRDA[®]51 lessens the natural interparticle attraction between cement grains in water. It does this by colloidal action, by absorption on the cement particles thus reducing their tendency to clump together and makes the mix more workable with less water. As a cement catalyst, WRDA[®]51 effects a more complete hydration of the cement, beginning immediately after the cement and water come together at the lower additions of WRDA[®]51 or immediately after a period of designed and controlled hydration at the higher additions. WRDA[®]51 increases the gel content of the concrete, the paste or binder that “glues” the concrete aggregates together. The increased gel content adds to the water retention and internal cohesiveness of the mix, reducing bleeding and segregation as it increases workability and placeability

Dispensing Equipment

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

Addition Rates

WRDA®51 will provide water reduction with no retardation, or mild retardation with increased dosage. After a period of initial retardation at the higher addition rates, hydration continues rapidly and completely

The amount of WRDA®51 to be used will typically range from 400 to 600mL / 100kg of cementitious material depending upon job requirements. However, high addition rates may be used due to variations in cement, aggregate or other job site conditions.

Compatibility with Other Admixtures WRDA®51 is compatible with all air-entraining mixtures. Due to a synergistic effect of WRDA®51, the quantity of air-entraining agent added to WRDA®51 admixed concrete may be reduced by 25-50%. By combining the separate effects of air entrainment and dispersion, the water requirement of concrete may be reduced up to 20%. Each admixture should be added separately. WRDA®51 contains no calcium chloride but is compatible in concrete with calcium chloride. Again each admixture should be added separately.

Health and Safety

See WRDA®51 Material Safety Data Sheet or consult GCP Applied Technologies.

Packaging

WRDA®51 is available in bulk, and 205L drums. WRDA®51 contains no flammable ingredients. It will freeze at about 0°C but will return to full strength after thawing and thorough mechanical agitation.

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

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.

WRDA is a trademark, 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 Colebald 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/wrda-51