1. Product Name
DRY-BLOCK® System of Integral Water Repellent Admixtures for Block and Mortar

2. Manufacturer
Grace Construction Products
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Cambridge, MA 02140
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3. Product Description
DRY-BLOCK® is a complete system of 2 water-repellent admixtures for concrete masonry construction. One admixture is mixed throughout the concrete during manufacture of the concrete masonry unit (CMU) by a qualified DRY-BLOCK producer; the other, a mortar admixture, is added to the mortar during the mixing process.

During the curing process, the polymeric admixtures within the CMU and mortar become an integral part of the concrete matrix by locking into the CMUs and mortar, providing long-lasting resistance to water penetration (see Figure 1). In addition, DRY-BLOCK Mortar Admixture enhances the bond between the CMU and mortar, further minimizing areas for water penetration into the wall system.

BASIC USE
DRY-BLOCK is an integral water repellent for concrete block and mortar. The DRY-BLOCK System is also a cost-effective alternative for use as damp-proofing in the back-up CMU units and mortar of a cavity wall.

Normally, splitface CMUs are more prone to wicking than standard CMUs. With DRY-BLOCK throughout, the splitface CMU repels moisture and dries out rapidly after a rain; the standard CMU remains moisture saturated (see Figure 2).

LIMITATIONS
DRY-BLOCK CMUs are only produced by qualified DRY-BLOCK producers who undergo annual qualifications of their mix designs to ensure they are able to manufacture water repellent units.

When a fully water repellent wall system is desired, DRY-BLOCK Admixtures must be used as components of both the CMU and mortar. The DRY-BLOCK System is not designed to withstand hydrostatic pressures greater than 2" (0.50 kPa).

The DRY-BLOCK System is only one part of a moisture protection system for CMU walls. Other important elements include:
- Proper drainage within the core and cavity
- Properly installed through-wall flashing and weep system

4. Technical Data
APPLICABLE STANDARDS
ASTM International
- ASTM C90 Standard Specification for Loadbearing Concrete Masonry Units
- ASTM C780 Standard Test Method for Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry
- ASTM C1314 Standard Test Method for Constructing and Testing Masonry Prisms Used to Determine Compliance with Specified Compressive Strength of Masonry
- ASTM C1357 Standard Test Method for Evaluating Masonry Bond Strength
- ASTM E96 Standard Test Methods for Water Vapor Transmission of Materials
- ASTM E514 Standard Test Method for Water Penetration and Leakage Through Masonry

PHYSICAL/CHEMICAL PROPERTIES
The DRY-BLOCK System achieves a Class E rating for Normal Weight, Medium Weight and Lightweight CMUs when evaluated for wind driven rain resistance using ASTM E514 with the test extended to 72 hours, using the rating criteria in ASTM E514-74.

The DRY-BLOCK System of Integral Water Repellent Admixtures has been evaluated for compliance with applicable standards for CMUs, masonry mortars and concrete masonry assemblies. Test reports are available from the manufacturer upon request.

5. Installation
PREPARATORY WORK
Concrete Masonry Units
Qualified DRY-BLOCK producers manufacture water repellent CMUs incorporating DRY-BLOCK Admixture for block using qualified mix designs and dosage rates.

Mortar
DRY-BLOCK Mortar Admixture is added at the recommended dosage rate, which is dependent on the type of mortar being used.

Mortar Mixing Procedure
- Agitate DRY-BLOCK Mortar Admixture before using.
- DRY-BLOCK should be added to the mix water prior to charging the cement and sand.
- Reduce the initial water used in the mortar.

PRECAUTIONS
DRY-BLOCK Block and Mortar Admixtures must be kept from freezing. The unopened admixtures have a shelf life of 18 months. An expiration date is marked on the outer container of each unit. For additional information on dosage rates and mixing instructions, request the DRY-BLOCK Mortar Admixture Data Sheet from the manufacturer.

Trial Batches - DRY-BLOCK Mortar Admixture is compatible with other Grace Mortar Admixtures, such as MORSET® and MORTARD®. All admixtures should be added to the mix separately. Trial batches are recommended as detailed in ASTM C780, using job-site materials and expected job-site climatic conditions to determine compatibility of materials and the necessary adjustments to the mix design for actual addition rates, workability, color and physical properties.

METHODS
- Design and construct in accordance with applicable design codes and the recommendations of The Construction Specifications Institute and with their permission. The manufacturer is responsible for technical accuracy. ©2008 Reed Construction Data. All Rights Reserved.
6. Availability & Cost

AVAILABILITY
Water repellent concrete block and concrete brick, as well as DRY-BLOCK Mortar Admixture, are available only from Qualified DRY-BLOCK Producers throughout North America. Contact the manufacturer for the nearest Qualified Producer.

COST
Product cost varies according to the size, density and shape of the units as well as market demands. Contact the local Grace representative for details.

7. Warranty
DRY-BLOCK Admixtures carry a manufacturer’s limited warranty of material specification compliance. Refer to Grace Construction Product’s Conditions of Sale for more information.

8. Maintenance
None required.

9. Technical Services
Technical sales representatives are available throughout North America from Grace Construction Products.

10. Filing Systems
- reed First Source®
- Sweet’s Catalog Files
- Additional product information is available from the manufacturer.
- www.DryBlock.com

Figure 2: Normally, splitface CMUs are more prone to wicking than standard CMUs. With DRY-BLOCK® throughout, the splitface CMU repels moisture and dries out rapidly after a rain; the standard CMU remains moisture saturated.

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