

Note to Specifier:

The **Admixture Systems** business of **BASF's Construction Chemicals Division** previously conducted business as **Degussa Admixtures, Inc.** and **Master Builders, Inc.**

The Master Builders brand of innovative chemical admixtures and solutions that have been used in concrete for over a century are now offered by **BASF – The Chemical Company**, the largest chemical company in the world.

Please update your Master Specifications to reflect the company name change.

For a MS Word version of this specification, please send an email to admixtures@basf.com

This is not a complete Section on its own. The information provided in this Section can be included at the appropriate locations in the Concrete Specification Sections. Options are provided in square brackets. Delete the ones that are not necessary.

To see the hidden notes, press Show/Hide feature ¶ (MS Word version only)

SECTION 03 05 00

INTEGRAL WATERPROOFING

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Section includes materials and procedures for integral waterproofing of concrete.

1.2 RELATED SECTIONS

- A. Section 01 10 00 - Summary
- B. Section 01 33 00 - Submittal Procedures
- C. Section 01 45 00 - Quality Control
- D. Section 01 60 00 - Product Requirements
- E. Section 03 10 00 - Concrete Forming and Accessories
- F. Section 03 30 00 - Cast-in-Place Concrete
- G. Section 03 31 26 - Self-Consolidating Concrete
- H. Section 03 35 00 - Concrete Finishing
- I. Section 03 39 00 - Concrete Curing

1.3 REFERENCES

- A. ASTM International (ASTM):
 - 1. ASTM C 39/C 39M - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
 - 2. ASTM C 94/C 94M - Standard Specification for Ready-Mixed Concrete
 - 3. ASTM C 1585 - Standard Test Method for Measurement of Rate of Absorption of Water by Hydraulic-Cement Concretes
 - 4. ASTM F 1869 - Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride
- B. American Concrete Institute (ACI):
 - 1. ACI 301 - Specifications for Structural Concrete
 - 2. ACI 301M - Specifications for Structural Concrete (Metric)
 - 3. ACI 305.1 - Specification for Hot Weather Concreting
 - 4. ACI 306.1 - Standard Specification for Cold Weather Concreting
 - 5. ACI 308.1 - Standard Specification for Curing Concrete
- C. NSF International (NSF):
 - 1. NSF/ANSI Standard 61 - Drinking Water System Components
- D. DIN (Deutsches Institut Fur Normung, Germany):
 - 1. DIN 1048 Part 5 "Testing Concrete – Testing of hardened concrete (specimens prepared in mould)"

1.4 SUBMITTALS

- A. Submit under provisions of Section 01 33 00 Submittal Procedures.
- B. Product Data: Manufacturer's data sheet of waterproofing admixture to be used.
- C. Manufacturer's Certificate: Certificate showing the conformance of admixtures to specified performance requirements.

1.5 QUALITY ASSURANCE

- A. Provide products from one manufacturer.
- B. A meeting shall be held two weeks prior to placement of concrete to discuss the Project and materials. Waterproofing admixture Manufacturer's Representative shall be present at the meeting.
- C. Conform to ACI 305.1 for hot weather concrete placement and protection.
- D. Conform to ACI 306.1 for cold weather concrete placement and protection.

1.6 STORAGE AND HANDLING

- A. Store in a clean, dry area protected from elements and maintained at a minimum temperature of 45 °F (7 °C).

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. BASF Corporation – Admixture Systems, 23700 Chagrin Blvd., Cleveland, OH 44122. Telephone: (800) 628-9990. Fax: (216) 839-8821. Email: admixtures@basf.com.

2.2 WATERPROOFING ADMIXTURE

- A. Shall be an integral crystalline capillary waterproofing admixture for concrete.
- B. Dosage shall be as recommended by the manufacturer.
- C. Shall satisfy the following requirements, when used at the manufacturer's recommended dosage:
 - 1. Reduction in capillary absorption: Not less than 40 percent relative to a companion untreated concrete mixture, when tested in accordance with ASTM C 1585.
 - 2. Reduction in water penetration: Not less than 40 percent relative to a companion untreated concrete mixture, when tested in accordance with DIN 1048.
 - 3. The admixture shall not affect the setting time, strength or durability properties of concrete.
- D. Shall be certified to NSF/ANSI 61.
- E. Product: Rheomac 300D as manufactured by BASF Corporation - Admixture Systems.
- F. Substitutions: Not permitted.

PART 3 - EXECUTION

3.1 BATCHING, MIXING AND TRANSPORTING

- A. Waterproofing admixture shall be batched at the concrete production plant in a manner similar to that for cement and other cementitious materials.
- B. Batching and mixing of materials shall be in accordance with ASTM C 94/C 94M.
- C. Mix for at least for 5 minutes after the addition of waterproofing admixture.

3.2 PLACING, CONSOLIDATION AND FINISHING

- A. Placing, consolidation and finishing of concrete shall be in accordance with the recommendations of ACI 301 [ACI 301M].

3.3 COLD WEATHER CONCRETING

- A. Concrete shall be placed and protected in accordance with ACI 306.1.

3.4 HOT WEATHER CONCRETING

- A. Concrete shall be placed and protected in accordance with ACI 305.1.

3.5 CURING AND PROTECTION

- A. Curing and protection of concrete shall be in accordance with Section 03 39 00 [ACI 308.1].

END OF SECTION