



The Chemical Company

SECTION 09 01 90 THOROSHEEN

NOTE TO SPECIFIERS:

THE PURPOSE OF THIS GUIDE SPECIFICATION IS TO ASSIST THE SPECIFIER IN DEVELOPING A PROJECT SPECIFICATION FOR THE USE OF BASF BUILDING SYSTEMS' PRODUCTS. IT IS NOT INTENDED TO BE A "STAND ALONE" DOCUMENT, NOR TO BE COPIED DIRECTLY INTO A PROJECT MANUAL. THIS GUIDE SPECIFICATION WILL NEED TO BE CAREFULLY REVIEWED FOR APPROPRIATENESS FOR THE GIVEN PROJECT AND EDITED ACCORDINGLY TO COMPLY WITH PROJECT-SPECIFIC REQUIREMENTS.

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Application of water-based, 100 percent acrylic paint for concrete and masonry that long-term protection against wind-driven rain, fungus, and mildew growth.

DELETE SECTIONS BELOW NOT RELEVANT TO THIS PROJECT; ADD OTHERS AS REQUIRED.

B. Related Sections:

1. Section 03 30 00 – Cast-in-Place Concrete.
2. Section 03 41 00 – Precast Structural Concrete.
3. Section 04 20 00 – Unit Masonry Assemblies.
4. Section 07 24 15 – Exterior Insulation and Finish System.
5. Section 09 24 00 – Portland Cement Plastering.

1.2 SYSTEM DESCRIPTION

A. Performance Requirements:

1. VOC Content: 0.67 pounds per gallon (81 g per L) ASTM D 3960
2. Flash Point: 200 degrees F (93 degrees C) per ASTM D56, Tag Closer Tester.
3. Resistance to Wind-Driven Rain: Meets requirements of TT-C-555B.
 - a. No water penetration when applied in 2 coats or in 1 coat over Thoro® Block Filler.
4. Artificial Weathering and UV Resistance, Xenon Arc, 5,000 hours: Passed per ASTM G26.
5. Water-Vapor Permeance: 19 perms per ASTM E96.
6. Flexibility, 1/4 inch Mandrel: Passed per ASTM D1737.
7. Mildew Resistance: No growth at 21 days at 70 degrees F (28 degrees C) (Apsergillus niger) per TT-P-29G, Federal Standard 141 B, Method 6271.

- ##### B. Approximate Coverage Rates: 100 to 200 square feet per gallon (2.5 to 4.9 sm per L).

1.3 SUBMITTALS

- ##### A. Comply with Section [01 33 00] [_ _ _].
- ##### B. Product Data: Submit manufacturer's technical bulletins and MSDS on each product.
- ##### C. Submit list of project references as documented in this Specification under Quality Assurance Article. Include contact name and phone number of person charged with oversight of each project.



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- D. Quality Control Submittals:
 - 1. Provide protection plan of surrounding areas and non-cementitious surfaces.

1.4 QUALITY ASSURANCE

- A. Comply with Section [0140 00] [_ _ _ _].
- B. Qualifications:
 - 1. Manufacturer Qualifications: Company with minimum 15 years of experience in manufacturing of specified products and systems.
 - 2. Manufacturer Qualifications: Company shall be ISO 9001:2000 Certified.
 - 2-3. Applicator Qualifications: Company with minimum of 5 years experience in application of specified products and systems on projects of similar size and scope, and is acceptable to product manufacturer.
 - a. Successful completion of a minimum of 5 projects of similar size and complexity to specified Work.
- C. Field Sample:
 - 1. Install at Project site or pre-selected area of building an area for field sample, minimum 4 feet by 4 feet (1.2 m by 1.2 m), using specified coating system.
 - 2. Apply material in strict accordance with manufacturer's written application instructions.
 - 3. Manufacturer's representative or designated representative will review technical aspects; surface preparation, repair, and workmanship.
 - 4. Field sample will be standard for judging workmanship on remainder of Project.
 - 5. Maintain field sample during construction for workmanship comparison.
 - 6. Do not alter, move, or destroy field sample until Work is completed and approved by Architect.
 - 7. Obtain Architect's written approval of field sample before start of material application, including approval of aesthetics, color, texture, and appearance.
- D. Preconstruction Field-Adhesion Testing:
 - 1. Perform adhesion per ASTM D3359, Measuring Adhesion by Tape, Method A. Minimum adhesion rating of 4A is required on 0 to 5 scale.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Comply with Section [01 60 00] [_ _ _ _].
- B. Comply with manufacturer's ordering instructions and lead-time requirements to avoid construction delays.
- C. Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- D. Store tightly sealed materials off ground and away from moisture, direct sunlight, extreme heat, and freezing temperatures.

1.6 PROJECT CONDITIONS

- A. Environmental Requirements:
 - 1. Ensure that substrate surface and ambient air temperature are minimum of 40 degrees F (4 degrees C) and rising at application time and remain above 40 degrees F (4 degrees C) for at least 24 hours after application. Ensure that frost or frozen surfaces are thawed and dry.

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2. Do not apply material if snow, rain, fog, and mist are anticipated within 12 hours after application. Allow surfaces to attain temperature and conditions specified before proceeding with coating system application.
3. Do not apply over sealant joints.
4. Do not apply to horizontal traffic-bearing surfaces.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Subject to compliance with requirements, provide products from the following manufacturer:
 1. BASF Building Systems
889 Valley Park Drive
Shakopee, MN 55379
Customer Service: 800- 433-9517
Technical Service: 800-243-6739
Direct Phone: 952-496-6000
Internet: www.BASFbuildingsystems.com
- B. Substitutions: Comply with Section [01 60 00] [_ _ _].
- C. Specifications and Drawings are based on manufacturer's proprietary literature from BASF Building Systems. Other manufacturers shall comply with minimum levels of material, color selection, and detailing indicated in Specifications or on Drawings. Architect will be sole judge of appropriateness of substitutions.

2.2 MATERIALS

- A. Water-based, 100 percent acrylic paint consisting of water, acrylic emulsion, fillers, and other proprietary ingredients.
 1. Density: 11.8 pounds per gallon (1.41 kg per L) per ASTM D1475.
 2. Solids Content, per ASTM D5201:
 - a. By Weight: 56.5 percent.
 - b. By Volume: 38 percent.
 3. Viscosity: 105 to 110 KU per ASTM D562 (Stormer).

DELETE COLORS BELOW NOT REQUIRED FOR PROJECT.

4. Colors:
 - a. Pastel.
 - b. Medium.
 - c. Ultra.
 - d. Neutral.
 - e. 48 standard colors through Elements color program.
5. Acceptable Product: Thorosheen® by BASF Building Systems.

2.3 MIXING

- A. Mix coating material with slow-speed mixer to ensure color uniformity and to minimize air entrapment.
- B. In multi-pail applications, mix contents of each new pail into partially used pail to ensure color consistency and smooth transitions from pail to pail.



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PART 3 - EXECUTION

3.1 EXAMINATION

- A. Comply with Section [01 70 00] [_____].

3.2 SURFACE PREPARATION

- A. Protect adjacent Work areas and finish surfaces from damage during coating system application.
- B. Ensure that substrate is sound, clean, dry, and free of dust, dirt, oils, grease, laitance, efflorescence, mildew, fungus, biological residues, chemical contaminants, and other contaminants that could prevent proper adhesion.
- C. Remove form tie wires and patch holes, small voids, and spalls using appropriate repair product.
- D. Clean surface by using high-pressure waterblasting with or without abrasives added to water stream, to achieve surface with texture similar to 100 grit sandpaper.
- E. Some stains and surface contaminants may require chemical removal. When chemical cleaners are used, neutralize compounds and fully rinse surface with clean water. Allow surface to dry before proceeding. Perform adhesion test as specified in Part 1 prior to application of coating system.
- F. Allow new concrete to cure minimum of 28 days before application begins. In addition to laitance and contaminants, remove form-release agents and previously applied sealers.
- G. For substrates with cracks, refer to manufacturer's product data sheet for appropriate crack-bridging material.
- H. Prime chalky substrates with primer approved by paint manufacturer. Apply base coat of block filler to CMU.

3.3 APPLICATION

- A. For uniformity of color and texture, use consistent application techniques throughout Project.
- B. Apply coating by brush or roller. For application by roller, use minimum of 3/4 inch (19 mm) nap roller.
- C. Work from wet edge with 50 percent overlap.
- D. Pretape fixtures, glass, or other items not intended for coating. Protect foliage from overspray.
- E. Work to natural break in surfaces before stopping Work.
- F. Before applying, dampen brushes or rollers with water. Use equipment designed for water-based coatings.
- G. Apply at 8 mils (203 microns) to 16 mils (406 microns) wetfilm thickness (WFT) per coat.
- H. Topcoats: For resistance to stains and abrasion, topcoat fully dried and cured coating film with clear water-based material approved by coating manufacturer. Before applying topcoat, allow coating material to cure.

3.4 CURING

- A. Allow proper drying of paints at the following rates based on 70 degrees F (21 degrees C) and 50 percent relative humidity:



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1. To touch: 1 to 2 hours.
2. To recoat or topcoat: 2 to 4 hours.
3. To full cure: 5 days.

3.5 CLEANING

- A. Clean tools and equipment with soapy water.
- B. Clean up and properly dispose of debris remaining on Project site related to application.
- C. Remove temporary coverings and protection from adjacent Work areas.

END OF SECTION