

SPEC-FINISH® COATED CONCRETE MASONRY WALL SYSTEM

- A. The following Guide Specification describes **Spec-Finish® Architectural Concrete Masonry Units**, consisting of a unique concrete mix design manufactured with **Spec-Finish® Preconditioner** designed specifically to receive **Spec-Finish® Coatings**.
- B. **Spec-Finish® CMU** and **Spec-Finish® Coating** can help contribute to LEED Certification.
- C. **Spec-Finish® CMU's** are to be installed by a professional masonry contractor under a standard masonry contract.
- D. **Spec-Finish® Coatings** are to be applied by an approved painting contractor under a standard painting contract.
- E. Proper coordination between Division 9 Sections and the Spec-Finish® portion of division 4 is required.

SECTION 042005 – SPEC-FINISH® COATED CONCRETE MASONRY WALL SYSTEM

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section describes:

Spec-Finish® Architectural Concrete Masonry Units (Spec-Finish® CMU) by Concrete Products Group, LLC. (CPG) Member Companies.

Spec-Finish® Preconditioner by ACM Chemistries, Inc.

Spec-Finish® Coatings by TNEMEC Company, Inc.

1.2 RELATED SECTIONS

- A. Division 04 Section “Unit Masonry” for general concrete masonry unit wall products and assembly.

1.3 REFERENCES

- A. ASTM C90
- B. ASTM C270

1.4 PERFORMANCE REQUIREMENTS

- A. Provide **Spec-Finish® CMU** by Concrete Products Group, LLC. (800-789-0872) that contains **Spec-Finish® Preconditioner** by ACM Chemistries, Inc. Manufacturers:

Spec-Finish [®] CMU Producers	Location	Phone Number
A-1 Block	Orlando, FL	407-422-3768
A. Jandris & Sons, Inc.	Gardner, MA	978-632-0089
Amcon Block	St. Cloud, MN	320-251-6030
Barnes & Cone	Syracuse, NY	315-437-0305
Basalite Concrete Products, LLC.	Dixon, CA	707-678-1901
Dagostino Building Blocks, Inc.	Schenectady, NY	528-374-3116
Fendt Builder's Supply	Farmington, MI	248-474-3211
Fizzano Brothers Concrete Products, Inc.	Crum Lynne, PA	610-833-1100
Best Block Construction Materials	Houston, TX	888-464-9341
Johnson Concrete	Salisbury, NC	704-636-5231
Midwest Block and Brick	Bridgeton, Mo	800-635-7110
Oberfields, LLC	Delaware, OH	70-369-7644
Orco Block and Hardscapes, Inc.	Stanton, CA	714-527-2239
Western Materials	Yakima, WA	509-575-3000

B. Provide Spec-Finish[®] Coating by TNEMEC Company, Inc. (877-226-1766).

1.5 SUBMITTALS

- A. Product Data: Provide ASTM C140 test reports for **Spec-Finish[®] CMU** and MSDS and Product Data Sheets for **Spec-Finish[®] Preconditioner** and **Spec-Finish[®] Coatings**.
- B. Manufacturer's Application Instructions: Refer to Manufacturer's product data sheet for application instructions regarding **Spec-Finish[®] Coatings** from TNEMEC Company, Inc.
- C. Samples for Initial Selection: Provide **Spec-Finish[®] Coating** color selection from TNEMEC Company, Inc.
- D. Samples for Verification: For each **Spec-Finish[®] Coating System Level** indicated or selected.
- E. LEED Data:
1. Recycled Content: For Credits MR 4.1 and Credit 4.2, provide product data and documentation indicating percentage (see section 2.1 A1.c) by weight of pre-consumer or post-consumer recycled content in **Spec-Finish[®] CMU**. Also provide statement indicating cost of pre-consumer or post-consumer recycled content.
 2. VOC Content: For IEQ Credit 4.2 Paints and Coatings, provide product data indicating VOC content in **Spec-Finish[®] Coating**.
- F. Material Certificates: For Spec-Finish[®] concrete masonry units, including preconditioning admixture. Include statement of material properties indicating compliance with requirements including compliance with standards and type designations within standards.

- G. Qualification Data: **Spec-Finish® Coating** applicator (painting contractor) shall provide proof of capability by TNEMEC Company, Inc.

1.6 QUALITY ASSURANCE

- A. Sample Panel: Build sample panel to verify mortar joint workmanship overall quality of masonry construction (including mortar joint workmanship), color, and final finish and to demonstrate aesthetic effects. Prior to application of **Spec-Finish® Coating**, clean sample panel in accordance with Section 3 Execution, Item 3.3 **Spec-Finish® CMU Clean Down**. Apply benchmark samples of **Spec-Finish® Coating**, of each color selected to verify preliminary selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution. Sample Panel will not be taken down or destroyed until completion of the project.
 - 1. Build sample panels in size approximately 48 inches (1200 mm) long by 48 inches (1200 mm) high.

1.7 QUALIFICATIONS

- A. Applicator: Painting contractors shall specialize in application of **Spec-Finish® Coatings** by TNEMEC Company, Inc.; un-qualified painting contractors will not be accepted.
- B. Three qualified applicators are as follows:
 - 1.
 - 2.
 - 3.
- C. Qualifications: The above mentioned contractors have been trained and have successfully applied the mentioned products. The above contractors have the correct equipment to apply the products successfully and all the contractors mentioned are in good credit standing.

1.8 DELIVERY, STORAGE AND HANDLING

- A. Store **Spec-Finish® CMU's** on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied. If units become wet, do not install until they are dry. Take care to not chip or damage **Spec-Finish® CMU's** during staging process at job site. Do not install chipped or damaged units.
- B. Store **Spec-Finish® Coating** materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F (7 deg C).
 - 1. Maintain containers in clean condition, free of foreign materials and residue.

1.9 PROJECT CONDITIONS: VERIFY CONDITIONS WITH TNEMEC

- A. Verify conditions of **Spec-Finish® CMU** with TNEMEC Company Representative prior to applying **Spec-Finish® Coatings**.

- B. Apply **Spec-Finish® Coating** only when temperature of surfaces to be painted and ambient air temperatures are between 50°F and 95°F (10°C and 35°C).
- C. Do not apply **Spec-Finish® Coatings** in snow, rain, fog, or mist; when relative humidity exceeds 85 percent; at temperatures less than 5°F (3°C) above the dew point; or to damp or wet surfaces.

PART 2 - PRODUCTS

2.1 SPEC-FINISH® PRE-CONDITIONED CONCRETE MASONRY UNITS (CMUs)

- A. Products: **Spec-Finish® CMU** by Concrete Products Group (CPG) supplied by an authorized producer listed in section 1.4 Performance Requirements.
 - 1. Concrete Masonry Units: ASTM C 90.
 - a. Unit Compressive Strength: Provide units with minimum average net-area compressive strength as required by structural engineer for location and purpose. SPECIFIERS NOTE: Insert f'm value required by Structural Engineer here:
 - b. Weight Classification: Normal weight. SPECIFIERS NOTE: If lightweight or mid weight units are required in Spec-Finish® areas, insert here:
 - c. Recycled Content: If project is pursuing LEED Certification, verify percentage of pre-consumer or post-consumer recycled content possible in the Spec-Finish® CMU with the authorized producer.
 - 1) Percentages of recycled content possible will vary in different regions.
- B. ADMIXTURE: Spec-Finish® Concrete Masonry Units shall be manufactured with **Spec-Finish® Preconditioner** Admixture by ACM Chemistries.

2.2 MORTAR

- A. Type N or S Mortar meeting, ASTM C270.

2.3 SPEC-FINISH® COATING SYSTEM

- A. Spec-Finish® Coating by TNEMEC Company, Inc.

Represented by (Agency Name) _____ (Phone) _____.

The coating system shall be applied to a Level _____ Finish, color to be selected by architect.

Level I: Standard Block Finish [Note: Application: Roller-Applied]

- 1. Primer – Waterborne Block Filler, applied @ 85 Ft²/gal.
- 2. Intermediate Coat – Modified Polyamine Epoxy, applied @ 200 Ft²/gal.

3. Topcoat – Aliphatic Polyurethane, applied @ 305 Ft²/gal.

Level II: Orange Peel Block Finish [Note: Application: Roller-Applied]

1. Primer – Waterborne Block Filler, applied @ 85 Ft²/gal.
[Note: Product must be backrolled and squeegeed]
2. Intermediate Coat – Modified Polyamine Epoxy, applied @ 200 Ft²/gal.
3. Topcoat – Aliphatic Polyurethane, applied @ 305 Ft²/gal.

Level III: Smooth Block Finish [Note: Application: Spray-Applied]

1. Primer – Waterborne Block Filler, applied @ 85 Ft²/gal.
[Note: Product must be backrolled and squeegeed]
2. Intermediate Coat – Modified Polyamine Epoxy, applied @ 200 Ft²/gal.
3. Topcoat – Aliphatic Polyurethane, applied @ 305 Ft²/gal.

Level IV: Joint-Filled, Glass Reinforced Finish [Note: Application: Roller-Applied]

1. Skim Coat: Epoxy Filler and Surfacer, applied at 60-80 Ft²/gal.
[Note: Product must be trowel applied]
2. Fiberglass Mat: Fiberglass Reinforcing Mat
3. Saturation Coat: Modified Polyamine Epoxy, applied @ 200 Ft²/gal.
4. Intermediate Coat: Modified Polyamine Epoxy, applied @ 200 Ft²/gal.
5. Finish Coat: Aliphatic Polyurethane, applied @ 305 Ft²/gal.

B. Or Equal [optional]:

Equal products from Dudick or Ceilcote can be submitted for review. Equal products may be accepted by the Owner or Owners representative upon submittal to the Owner or Owners representative of the necessary data and information. No request for substitution will be considered which decreases the film thickness and/or the number of coats to be applied or which offers a change from the generic type of coating specified. Any products submitted must be accompanied by ASTM test data supporting the claim of equality of each product proposed for substitution. The owner or Owners representative shall be the sole judge of equality.

- C. **VOC Content:** If project is pursuing LEED Certification provide **Spec-Finish® Coatings** that comply with the following limits for VOC Content, exclusive of colorants added to a tint base, when calculated according to 40 CFR 59, Subpart D (EPA method 24), as required for IEQ Credit 4.2: Paints and Coatings:

1. Green Seal Standard (GS-11)
 - a. Flat Paints and Coatings: VOC content of not more than 50 g/L.
 - b. Non-Flat Paints and Coatings: VOC of not more than 150 g/L.

PART 3 - EXECUTION

3.1 MORTAR JOINTING FOR SPEC-FINISH® UNITS

- A. Lay **Spec-Finish®** CMU's maintaining 3/8" mortar joints. Tool joints slightly concave with thumb print hard using a jointer larger than joint thickness unless otherwise indicated.

3.2 GENERAL ERECTION REQUIREMENTS

- A. Install **Spec-Finish®** CMU level, aligned, plumb and true unless otherwise indicated.
- B. Neatly cut **Spec-Finish®** CMU's utilizing power masonry saw to obtain crisp, sharp edges that fit neatly with all adjoining work.
- C. Place adequate lighting a reasonable distance from the masonry work to ensure even illumination of the area. Do not use trough lighting.
- D. Lay units with full mortar coverage on head and bed joints, taking care not to obstruct or fill cores to be grouted or insulated. Keep cavity areas free of debris.
- E. Tool all mortar joints with a concave "C" profile with thumb print hard. Remove all excess mortar from the face of masonry units before it sets; **remember this is the finished surface!** **SPECIFIERS NOTE: Rake finish joints are not recommended**
- F. Cover and keep dry all materials stored at the jobsite. At the end of work each day cover the top of the wall in such a way that rain or snow will not get into the cores or wall cavity!!

3.3 FINAL CLEAN DOWN

- A. Job site mixed muriatic acid is specifically prohibited; Use Sure-Klean Burnished Custom Masonry Cleaner or Sure-Klean Custom Masonry Cleaner. [**SPECIFIERS NOTE: Select one in strict accordance with manufacturer's recommendations.**] Thoroughly pre-wet area to be cleaned. Allow product to work and thoroughly rinse with clean potable water when complete. All work is to be done with low pressure equipment. Job site sample panel must first be cleaned and approved by the architect before proceeding with the cleaning of the building.

3.4 EXAMINATION PRIOR TO COATING APPLICATION

- A. Examine substrates, areas, and conditions for compliance with the following requirements and other conditions affecting performance of the **Spec-Finish®** Coating system:
 1. Allow mortar to cure 14 days. Level protrusions and mortar spatter. Begin coating application only after unsatisfactory conditions have been corrected and surfaces are

dry and Architect has approved **Spec-Finish®** CMU Walls to receive **Spec-Finish®** Coating.

3.5 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations applicable to substrate and Spec-Finish® system.
- B. Clean substrates of substances that could impair bond of Spec-Finish® coating according to manufacturer's recommended practices, including dirt, oil, grease, and incompatible paint and encapsulants.
- C. Apply Spec-Finish® CMU Filler by Tnemec prior to Spec-Finish® Coating.

3.6 SPEC-FINISH® COATING APPLICATION

- A. Apply Spec-Finish® coating according to manufacturer's written instructions Use applicators and techniques suited for coating and substrate. **[NOTE: Must use TNEMEC Spec-Finish® Application Guide].**
- B. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Tint undercoats to match color of topcoat, but provide sufficient difference in shade of undercoats to distinguish each separate coat.
- C. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.
- D. Apply coating to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.
- E. Thickness: Apply **Spec-Finish® Coating** in wet-film thickness recommended by manufacturer.

3.7 FIELD QUALITY CONTROL

- A. Pre-Construction Meeting between the Mason, Coating Contractor, the block manufacturer and Tnemec: to discuss concrete masonry unit construction, mortar joints and cleaning prior to beginning Spec-Finish® wall construction.

3.8 CLEANING

- A. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- B. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

End of Section 04 20 05