

TOPCOAT[®] System Specifications Concrete Plaza Deck Balcony with Ceramic Tile

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TOPCOAT® SYSTEM SPECIFICATIONS CONCRETE PLAZA DECK BALCONY WITH CERAMIC TILE



Part 1 – General

1.01 RELATED SECTIONS/DOCUMENTS

TOPCOAT® Detail Drawings, site specific drawings and General Provisions of the contract, including General, Supplementary and Special Conditions found in Division 7 Specification Sections, apply to the work addressed in this section.

1.02 SYSTEM DESCRIPTION

Extent of TOPCOAT® Plaza Deck Balcony System (TOPCOAT® Balcony System) work is indicated on the drawings and is further defined by provisions of this section which includes flashing and reinforcing of joints and junctions, and penetrations/accessories. Areas to be waterproofed include existing structural concrete balconies as indicated on drawings. Final determination of the fitness of the TOPCOAT® Balcony System, or its components, for any given concrete balcony may not be made by any representative other than a member of GAF Materials Corporation (GAFMC) Contractor Services Department.

1.03 WARRANTY

Provide GAFMC Diamond Pledge System Guarantee per the requirements of the Building Owner and/or Project Architect for the TOPCOAT® products installed in accordance with these specifications. Should a question arise as to the appropriateness of the FireShield® Roof Coating System for any given smooth BUR roof, please contact GAFMC's Contractor Service Department.

See limited warranty and guarantee for complete coverage and size restrictions.

1.04 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Provide primary products, including TOPCOAT® Surface Seal SB Membrane, TOPCOAT® FlexSeal, reinforcing fabric, etc., by a single manufacturer (GAFMC.), which has produced this type of product successfully for not less than twenty (20) years. Provide secondary products only as approved by GAFMC for use with the specified TOPCOAT® Balcony System.
- B. Installer Qualifications: A single Installer or Firm shall perform all work addressed in this section, and shall be certified by GAFMC, for installation of the TOPCOAT® Balcony System.
- C. Installer Authorization: Installer shall possess written authorization from GAFMC. which certifies they are approved for installation of the TOPCOAT® Balcony System.

1.05 SUBSTRATE CONDITIONS

- A. The TOPCOAT® Balcony System is to be applied over structural concrete balconies only (minimum 2500 psi) with a positive slope. Concrete balcony substrate must be completely cured and dry before application of TOPCOAT® products. Substrate should not pond water for a period longer than 48 hours. Do NOT use TOPCOAT® Surface Seal SB for application on lightweight concrete.
- B. The bonding surface must be clean and free of ponding water, ice and snow.
- C. If any questions arise regarding the compatibility of TOPCOAT® products with an existing substrate, Installer shall prepare test patches to check adhesion (addressed in Part 3 of this specification). Contact GAFMC's Contractor Services Department with questions concerning substrates, for additional information and recommended test patch materials.

Part 2 – Products

2.01 ACCEPTABLE MANUFACTURERS

GAF Materials Corporation

2.02 MATERIALS - GENERAL

A. TOPCOAT® Topester Reinforcing Fabric

Non-woven, spun-bonded polyester fabric that must be used in conjunction with FlexSeal at all seams balcony penetrations, joints or changes in plane that have high shear or stress. penetrations. Topester Fabric Roll Sizes: 6" x 150', 12" x 150', 36" x 150' Topester reinforcing fabric can be used when additional coating strength is specified or desired.

B. TOPCOAT® Wallcote™ Primer

Clear, water-based primer/sealer to be applied to the structural concrete balcony prior to the installation of TOPCOAT® Plaza Deck Balcony Membrane. This product may not be applied in temperatures under 42°F.

Packaging:	5 gallon container
Drying time:	1-2 hours at 70°F
Application rate:	1 gal / 150 sf
Total solids:	23 ± .5%
Specific gravity:	1.02
Viscosity:	150 ± 50 cps

C. Tile Adhesive

Polymer modified mortar

D. TOPCOAT® Surface Seal SB

Solvent-based, spray, or roller applied liquid Balcony waterproofing membrane. Can be applied in temperatures under 42°F. This product cannot be applied in some counties in the State of California.

Application Rate:	1.0 to 1.5 gallons/100 SF per coat
Application Method:	Airless sprayer, roller, brush
Application Temperature (surface):	32° – 120°F
Drying Time (75°F, 50% RH):	Approximately 24 hours per coat
Tensile Strength:	565 ± 10 psi
Wet Mil Thickness:	1.0 Gallon / 100 SF Application: 16 wet mils 1.5 Gallon / 100 SF Application: 24 wet mils
Dry Mil Thickness:	
1.0 Gallon/100 SF Application:	8 dry mils
1.5 Gallon / 100 SF Application:	12 dry mils

E. TOPCOAT® FlexSeal

White, solvent-based synthetic elastomeric compound designed to line and waterproof. This product is easiest to apply at temperatures over 42°F. A low viscosity version of FlexSeal (FlexSeal LV) is available for use in cold temperatures. FlexSeal LV can also be used on relatively flat surfaces because it is self-leveling capabilities.

Application Rate (seams):	5 gallons total/100 ft.
Application Method:	Trowel or stiff bristle brush
Application Temperature (air, surface):	32° - 120°F
Drying Time (75°F, 50% RH):	Approximately 24 hours
Recommended Wet Mil Thickness:	85 wet mils
Recommended Dry Mil Thickness:	50 dry mils
Total Solids (by weight):	77% ± 2%
Total Solids (by volume):	66% ± 2%
Specific Gravity:	1.24 ± 0.1
Weight per Gallon:	10.3 ± 0.5lbs
Viscosity (75°F):	600,000 ± 100,000 cps
LV-Viscosity (75°F):	150,000 ± 15,000 cps
Tensile:	485 psi ± 10%
Storage:	Store in well-ventilated area at 50°F to 80°F; protect from freezing
Shelf Life:	1 Year
Clean-up:	Mineral Spirits, Toluene, Xylene

F. TOPCOAT® Roofing Membrane

Water-based 100% acrylic spray-applied liquid roofing membrane. Curing is enhanced by UV exposure. Available in white, gray, patina green and other standard as well as custom colors. Do not apply in temperatures under 42°F.

Application Rate:	1.0 to 1.5 gal / 100 sf per coat
Application Method:	Airless sprayer
Application Temperature (air, surface):	42° – 120°F
Drying Time (75°F, 50% RH):	Approx 24 hrs/coat
Total Solids (by weight):	71 ± 3%
Specific Gravity:	1.48 ± 0.06
Weight per Gal:	12.3 ± 0.5 lbs
Viscosity (75°F):	19,000 ± 3,000 cps
PH:	10.0 ± 1.0
Elongation:	375% ± 25%
Tensile Strength:	275 ± 25 psi
Water Permeability:	0.003 perm inch
Freeze-Thaw Stability:	Passes five (5) cycles
Low Temperature Flexibility:	35 mil dry film will bend 180° @ 30°F without fracturing
Weatherability:	1,000 hours Atlas Weather-o-meter® exposure per ASTM G-26
Tensile Strength:	150% of original
Elongation:	85% of original 2,000 hrs
Atlas Weather-o-meter® exposure per ASTM G-26	No cracking, embrittlement, loss of adhesion or discoloration 6,000 hours QUV® exposure, type UVB bulb, per ASTM G-53
No cracking, embrittlement, loss of adhesion or discoloration	

G. TOPCOAT® Flashing Grade (Regular and Spray Formula)

Light-gray, water-based 100% acrylic synthetic rubber sealant to be applied on all seams, fasteners, flashings and penetrations. Curing is enhanced by UV exposure. A sprayable version of Flashing Grade (Flashing Grade – Spray Formula) is available for use. Flashing Grade – Spray Formula has all the same properties as regular Flashing Grade, but is lower in viscosity. Do not apply in temperatures under 42°F.

Application Rate:	5 gal total/125 ft (6" width)
Application Method:	Brush or caulking gun (airless sprayer)
Application Temperature (air, surface):	42° – 120°F
Drying Time (75°F, 50% RH):	Approx 24 hrs
Tensile Strength:	225 ± 10 psi
Total Solids (by weight):	68% ± 1%
Specific Gravity / Weight per Gallon:	1.44 / 12.0 lbs
Viscosity – Regular (75°F):	225,000 ± 22,500 cps
Viscosity – Spray Form (75°F):	140,000 ± 14,000 cps
Clean-up:	Water before curing

Part 3 – Execution

3.01 PREPARATION OF SUBSTRATE

- A. Examine Substrates: to receive new waterproofing. Do not proceed with installation of the TOPCOAT® Balcony System until unsatisfactory conditions have been corrected in a manner acceptable to the manufacturer (GAFMC).
- B. Preparation of the Balcony Substrate: is the responsibility of the Installer. Installer shall address and correct all of the following:
- Treatment of large gaps and cracks
 - Protect adjacent surfaces that will not be receiving waterproofing.
 - Treatment of ponding water areas
 - Thorough cleaning/Removal of existing paints and coatings
 - Miscellaneous items

- C. Treatment of Large Gaps and Cracks: All large gaps and cracks (greater than 1/4") shall be repaired using a high quality concrete grout, or TOPCOAT® FlexSeal and 6" fabric. Grout must be fully cured before application of TOPCOAT® products.
- D. Penetrations: Penetrations to the concrete deck should be sealed using 6" Topester fabric and FlexSeal in a 3 course application.
- E. Thorough Cleaning/Removal of Existing Paints and Coatings: Structural concrete substrate must be pressure-washed with water. A minimum working pressure of 3,000 psi shall be used to remove all dirt, dust, previous paints/coatings which are delaminating and waste products (oil, solvents, grease, animal fats, etc.). All existing silicone-based sealants must be completely removed from roof substrate prior to application of TOPCOAT® products.
- F. Preparation of Test Patches: Installer shall prepare no less than three (3) test patches for all questionable substrates to verify adhesion of TOPCOAT® products. Minimum test patch size shall be one (1) square foot. After the test patches have been applied, allow at least one week of drying time before checking adhesion. Check adhesion by slicing an "X" (approx. 6" in size) near the center of the test patch. Then try to remove the TOPCOAT® material at the center of the "X" with a spatula. Test patches shall be labeled and photographed to document adhesion test results. Installer shall consult with GAFMC's Contractor Services Department concerning all adhesion test results.

3.02 APPLICATION – SOLVENT BASED

(Note: Listed drying times for various TOPCOAT® products are directly affected by environmental conditions and thickness of application. Additional drying time must be allowed when experiencing high relative humidity, low temperatures and/or very thick product application to prevent improper curing.)

- A. Install 1/2" bead of TOPCOAT® FlexSeal or FlexSeal LV at all internal corners.
- B. Prime balcony with Wallcote™ block primer at a rate 1/2gal / sq. and allow to cure. Concrete balconies older than 1 year will not require the primer.
- C. Apply base coat of TOPCOAT® Surface SB at a rate of 1gal/100 sq.ft. and allow to dry for at least 24 hours until fully cured.
- D. Apply 6" fabric imbedded in TOPCOAT® FlexSeal at intersections of horizontal and vertical planes as flashing.
- E. Apply second coat of TOPCOAT® Surface Seal SB at a rate of 1 gal per 100 sq. ft and allow to dry for at least 24 hours until fully cured.
- F. Install tiles using an approved adhesive.
- G. Grout Joints between the tiles shall be no larger than 3/8" and be filled with a flexible grout sealant as recommended by the tile manufacturer.

3.03 APPLICATION – WATER BASED

- A. Install 1/2" bead of TOPCOAT® FlexSeal or FlexSeal LV at all internal corners
- B. Apply base coat of TOPCOAT® Membrane at a rate of 1gal/100 sq.ft. and allow to dry for at least 24 hours until fully cured.
- C. Apply 6" fabric imbedded in TOPCOAT® FlexSeal at intersections of horizontal and vertical planes as flashing.

- D. Apply second coat of TOPCOAT® Membrane at a rate of 1 gal per 100 sq. ft and allow to dry for at least 24 hours until fully cured.
- E. Apply third coat of TOPCOAT® Membrane at a rate of 1 gal per 100 sq. ft. and dry for at least 24 hours until fully cured.
- F. Install tiles using an approved adhesive.
- G. Grout Joints between the tiles shall be no larger than 3/8" and be filled with a flexible grout sealant as recommended by the tile manufacturer.