

# TOPCOAT<sup>®</sup> System Specifications Smooth BUR & Smooth Surfaced MB

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America's Largest Roofing Manufacturer!™*

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# TOPCOAT® System Specifications Smooth BUR and Smooth Surfaced Modified Bitumen



## PART 1 – GENERAL

### 1.01 SYSTEM DESCRIPTION

The TOPCOAT® Roofing System can be applied on Smooth Built-Up Roofing (BUR) and Smooth Modified Bitumen (MB). This specification addresses unique aspects for this type of installation. Unless otherwise specified in this section, GAF Materials Corporation (GAFMC) standard specifications shall be used for installations on smooth BUR and MB.

### 1.02 SUBSTRATE CONDITIONS

- A. The TOPCOAT® Roofing System is to be applied over smooth, dry, sound, asphaltic BUR or MB only. Roof must have positive drainage. Do not apply on coal tar substrates or roofs which have been covered with gravel. Smooth BUR or MB surface must be older than 90 days. Do not apply TOPCOAT® products over friable and/or brittle roofing. Substrate should not pond water for a period longer than 48 hours after precipitation stops.
- B. Test patches shall be prepared in representative roof areas to check adhesion of TOPCOAT® products before application on any smooth BUR or MB roof. TOPCOAT® Coatings will not adhere to any existing silicone-based coatings.
- C. **The bonding surface must be free of ponding water, ice, snow, splits, oils, grease and debris.**
- D. GAFMC/ TOPCOAT® requires that a moisture scan be done by an independent source and requires it for a warranty.
- E. If the moisture scan reveals more than 20% of the roof area is wet, consider other reroofing options.
- F. The TOPCOAT® Roofing System should not be used on heavy-traffic bearing substrates. If foot traffic is expected, a rooftop walkway system approved by GAFMC must be used.

### 1.03 WARRANTY

Provide GAFMC/ TOPCOAT® Weather Stopper® Integrated Roofing System Guarantee per the requirement 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 TOPCOAT® Roof Coating System for any given smooth BUR or MB roof, please contact GAFMC’s Contractor Service Department.

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

### 1.04 REQUIREMENTS

- A. Project Registration
- B. A copy of the moisture scan must be submitted to GAFMC/ TOPCOAT® as a requirement for warranty issuance.

## PART 2 – PRODUCTS

### 2.01 ACCEPTABLE MANUFACTURERS

GAF Materials Corporation

### 2.02 MATERIALS - GENERAL

**Note Drying Times: Listed drying times for various TOPCOAT® products are directly affected by environmental conditions and thickness of application. Allow additional drying time when experiencing high relative humidity, low temperatures and/or very thick product application to prevent improper curing and/or product “wash-off”.**

Low Slope  
Restoration Specs

## A. TOPCOAT® Flashing Grade

TOPCOAT® Flashing Grade is a light gray, water-based 100% acrylic synthetic rubber sealant which is applied to seams, fasteners, flashings and penetrations prior to the application of the TOPCOAT® Elastomeric Roofing Membrane. Like the TOPCOAT® Roofing Membrane, it has superior adhesion, flexibility and resistance to ultraviolet degradation. Do not apply at temperatures below 42°F. Substrate temperatures must be below 120°F when applying product.

Application Rate (seams):	5 gallons/125 ft. (6" width)
Application Method:	Brush or caulking gun
Application Temp (air, surface):	42° - 120°F
Drying Time (75°F, 50% RH):	Approximately 24 hours
Recommended Wet Mil Thickness:	105 wet mils
Recommended Dry Mil Thickness:	60 dry mils
Total Solids (by weight):	68% ± 1%
Total Solids (by volume):	56% ± 2%
Specific Gravity:	1.44 ± 0.1
Tensile:	225 psi ± 10%
Weight per Gallon:	12.0 ± 0.5 lbs
Viscosity (75°F):	225,000 ± 22,500 cps
Clean-up:	Water before curing

## B. TOPCOAT® FlexSeal

TOPCOAT® FlexSeal is a solvent-based, synthetic rubber sealant designed for use in a wider range of temperatures. FlexSeal must be used as the flashing material wherever Surface Seal SB will be used as the base coating. This product offers unique flow properties that allow encapsulation of fasteners with little or no tooling. This product is easiest to apply in temperatures above 32°F. Substrate temperatures must be below 120°F when applying product.

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

## C. TOPESTER Reinforcing Fabric

TOPESTER Fabric is a non-woven, spun bonded 100% polyester web that must be used in conjunction with TOPCOAT® Flashing Grade and FlexSeal at all penetrations, joints or changes in plane that are subjected to high shear or stress.

Average Weight (Ounces per square yard) per ASTM D1117:	1.5
Average Tensile Strength per ASTM D1628:	44 psi
Average Elongation at break per ASTM 1628:	53%
Trapezoidal Tear Strength per ASTM D2263:	18.5 lbs

## D. TOPCOAT® MB Plus



TOPCOAT® MB Plus is a water-based acrylic low VOC, sprayable polymeric liquid, which cures to form a seamless rubber membrane. Covers and protects most roof surfaces including modified bitumen (smooth and granulated), smooth BUR, Hypalon, and metal. MB Plus is an ENERGY STAR® qualified reflective product, which will help in reducing building temperatures. Meets the stringent standards set by the Cool Roof Rating Council<sup>SM</sup> for solar reflectance and thermal emittance. It is highly reflective, flexible, and due to unique emulsion chemistry, resists unsightly bleed-through over asphalt substrates better than solvent-based systems. Available in white (for maximum reflectivity) and custom colors. It is non-flammable, presents minimal hazard to the applicator or the environment, and cleans up with water. Do not apply at temperatures below 42°F. Substrate temperatures must be below 120°F when applying product.

Application Rate:	1.0 to 3.0 gallons/100 sq.ft. total
Application Method:	Airless sprayer or roller
Application Temp (air, surface):	42° - 120°F
Drying Time (75°F, 50% RH):	Approximately 24 hours per coat
Wet Mil Thickness:	(1.0 Gallon/100SF) - 16 wet mils
Dry Mil Thickness:	(1.0 Gallon/100SF) - 9 dry mils
Total Solids (by weight):	65% ± 2%
Total Solids (by volume):	54% ± 2%
Specific Gravity:	1.32 ± 0.1
Weight per Gallon:	11.0 ± 0.5 lbs.
Viscosity (75°F):	15,000 ± 2,000 cps
Tensile Strength:	150 psi
Elongation:	275%
Clean-up:	Water before curing

## E. TOPCOAT® Surface Seal SB



TOPCOAT® Surface Seal SB is a solvent-based, sprayable thermoplastic rubber liquid, which cures to form a seamless rubber membrane. It is highly reflective, provides extra protection and is highly flexible to accommodate temperature related expansion and contraction of the roof system. Surface Seal SB is an ENERGY STAR® qualified reflective product which will help in reducing building temperatures. Meets the stringent standards set by the Cool Roof Rating Council<sup>SM</sup> for solar reflectance and thermal emittance. Available in white, aluminum, and custom colors. Ideal for application on most commercial roofs in temperatures as low as 32°F, providing product is stored at room temperature prior to installation. Substrate temperatures must be below 120°F when applying product.

Application Rate:	1.0 to 1.5 gallons/100 sq.ft. per coat
Application Method:	Airless sprayer, roller or brush
Application Temp (air, surface):	32° - 120°F
Drying Time (75°F, 50% RH):	Approximately 24 hours per coat
Wet Mil Thickness:	(1.0 Gallon/100SF) - 16 wet mils
Dry Mil Thickness:	(1.0 Gallon/100SF) - 8 dry mils
Total Solids (by weight):	64% ± 3%
Total Solids (by volume):	50% ± 2%
Specific Gravity:	1.20 ± 0.09
Weight per Gallon:	10.1 ± 0.5 lbs.
Viscosity (75°F):	11,000 ± 2,000 cps
Tensile Strength:	700 psi
Elongation:	650%
Clean-up:	Mineral spirits

## PART 3 – EXECUTION

### 3.01 PREPARATION OF SUBSTRATE

- A. Examine substrate to receive new roofing. Do not proceed with new roofing until adhesion has been verified by test patches, other preparatory work has been completed and unsatisfactory conditions have been corrected in a manner acceptable to GAFMC.

- B. Treatment of Damaged/Deteriorated BUR or MB: Any areas where BUR or MB has blistered, buckled and/or become wet must be removed and repaired using similar products manufactured by GAF Materials Corporation (new BUR or MB repair materials must be allowed to weather at least 30 days before applying TOPCOAT® products to these repaired areas). All areas where the BUR or MB surface has significantly craze cracked (i.e., gaps in width and/or depth greater than 1/16") must be repaired using TOPCOAT® FlexSeal to bring the substrate to a smooth, workable surface. TOPCOAT® FlexSeal can be applied by either squeegee or brush when repairing craze cracks. Allow at least 24 hours drying time before application of other TOPCOAT® products (additional drying time must be allowed when very thick TOPCOAT® FlexSeal Flashing Grade applications are required).
- C. Substrate Cleaning: Roof substrate must be carefully pressure washed with water. Use an approximate working pressure of 2,000 psi (depending on condition of roof) to remove all dirt, dust, chalking, loose materials, etc. Take care not to damage the roof surface or force water into the roof system. Use hot water and mild detergent to remove grease and/or oils from the roof substrate. If mildew or algae are present, use bleach to treat these areas, then pressure wash surface.
- D. Substrate must be clean, completely dry and free of any debris before application of TOPCOAT® products.

### 3.02 APPLICATION OF SURFACE SEAL SB SYSTEM

- A. All roof penetration areas, splits, drains, and scuppers must be treated with a 6" wide area of TOPCOAT® FlexSeal, one layer of 6" TOPESTER Fabric and a final layer of FlexSeal to completely embed the Fabric. Feather the FlexSeal onto the existing smooth BUR or MB substrate.
- B. After at least 24 hours drying time, inspect preparatory/flashing work for problem areas (i.e., gaps, cracks, fishmouths, air pockets, etc.) to ensure that work is complete and satisfactory. Repair any deficiencies using TOPCOAT® FlexSeal and TOPESTER Fabric, as required.
- C. Coating Application:  
**NOTE: Recommended method for application of Surface Seal SB is by airless sprayer. A roller can be used; however, more coats may be required to obtain specified mil thickness.**
  1. Spray-apply base coat of TOPCOAT® Surface Seal SB at a rate of 1.25 gallons per 100 sq.ft. Allow at least 24 hours drying time and inspect the base coat for defects, flaws, or holidays. Correct any unsatisfactory conditions prior to proceeding.
  2. Spray-apply finish coat (same color as base coat) of TOPCOAT® Surface Seal SB at a rate of 1.75 gallons per 100 sq.ft. Do not apply finish coat unless the base coat is clean and dry and will provide proper adhesion.
  3. Allow at least 24 hours drying time prior to allowing foot traffic or inspection of the roof. After 24 hours has elapsed, inspect the final roof surface for flaws, holidays, insufficient thickness, etc., and repair any unsatisfactory conditions. Specified membrane thicknesses are minimum 24 mils field and 80 mils on roof penetration details.

### 3.03 APPLICATION OF MB PLUS SYSTEM

- A. All roof penetration areas, splits, drains, and scuppers must be treated with a 6" wide area of TOPCOAT® Flashing Grade, one layer of 6" TOPESTER Fabric and a final layer of Flashing Grade to completely embed the Fabric. Feather the Flashing Grade onto the existing smooth BUR or MB substrate.
- B. After at least 24 hours drying time, inspect preparatory/flashing work for problem areas (i.e., gaps, cracks, fishmouths, air pockets, etc.) to ensure that work is complete and satisfactory. Repair any deficiencies using TOPCOAT® Flashing Grade and TOPESTER Fabric, as required.

C. Coating Application:

**NOTE: Recommended method for application of MB Plus is by airless sprayer. A roller can be used; however, more coats may be required to obtain specified mil thickness.**

1. Spray-apply base coat of TOPCOAT® MB Plus at a rate of 1.25 gallons per 100 sq.ft. Allow at least 24 hours drying time and inspect the base coat for defects, flaws, or holidays. Correct any unsatisfactory conditions prior to proceeding.
2. Spray-apply finish coat (same color as base coat) of TOPCOAT® MB Plus at a rate of 1.75 gallons per 100 sq.ft. Finish coat should not be applied unless the base coat is clean and will provide proper adhesion.
3. Allow at least 24 hours drying time prior to allowing foot traffic or inspection of the roof. After 24 hours has elapsed, inspect the final roof surface for flaws, holidays, insufficient thickness, etc., and repair any unsatisfactory conditions. Specified membrane thicknesses are minimum 27 mils field and 80 mils on roof penetration details.

**For application questions, please contact GAFMC Contractor Services at 1-800-766-3411.**

**Note:** Repair leaks promptly to avoid adverse effects, including mold growth.

For specific TOPCOAT® specification documents and construction details, please contact the GAF Materials Corporation Architectural Information Services Department at 1-800-522-9224.