

TOPCOAT[®] System Specifications - Hypalon & PVC

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America's Largest Roofing Manufacturer!™*

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PART 1 – GENERAL

1.01 SYSTEM DESCRIPTION

The TOPCOAT® Roofing System can be applied on Hypalon® and PVC. This specification addresses unique aspects for this type of installation.

1.02 SUBSTRATE CONDITIONS

- A.. The TOPCOAT® Roofing System is to be applied over dry, sound Hypalon or PVC only. Roof must have positive drainage. Hypalon or PVC must be older than one year. 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 Hypalon or PVC 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 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 hypalon or PVC 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".

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 white solvent-based synthetic elastomeric sealant. FlexSeal is extremely flexible and durable. Like all solvent-based products, the surface must be completely free of moisture before application. A low viscosity version of FlexSeal (FlexSeal LV) is available for use in confined areas.

Application Rate (seams):	5 gallons total/150 ft. (6" width)
Application Method:	Stiff bristle brush, trowel or caulking gun
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:	60 dry mils
Total Solids (by weight):	77% ± 1%
Total Solids (by volume):	66% ± 2%
Specific Gravity:	1.24 ± 0.1
Tensile:	485 psi ± 10%
Weight per Gallon:	10.3 ± 0.5lbs
Viscosity (75°F):	600,000 ± 100,000 cps
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 or 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® Elastomeric Roofing Membrane



TOPCOAT® Elastomeric Roofing Membrane is a water-based 100% acrylic spray-applied liquid which cures to form a seamless elastomeric roofing membrane specially designed to seal the entire roof. TOPCOAT® Elastomeric Roofing Membrane is an ENERGY STAR® qualified reflective product, which will help in reducing building temperatures. Meets the stringent standards set by the Cool Roof Rating CouncilSM for solar reflectance and thermal emittance. It offers high tensile strength and elongation, and is virtually undamaged by extended exposure to solar ultraviolet energy. Ultraviolet rays enhance curing. It is low in VOC, non-flammable, and presents minimal hazard to the applicator and the environment. It is available in white (for maximum reflectivity) and 15 standard colors. Custom tinting is available upon request. 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
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 - 10 dry mils
Total Solids (by weight):	71% ± 3%
Total Solids (by volume):	58% ± 2%
Specific Gravity:	1.48 ± 0.06
Weight per Gallon:	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:	5.28 perm inch (ASTM D-1653)
Freeze-Thaw Stability:	Passes five (5) cycles
Low Temp Flexibility:	35 mil dry film will bend 180° @ -30°F without fracturing
Weatherability :	1,000 hours Atlas Weather-o-meter® exposure per ASTM D-412, ASTM G-26. Tensile Strength: 150% of original Elongation: 85% of original 1,500 hours Atlas Weather-o-meter® exposure per ASTM D-412, ASTM G-26. No cracking, embrittlement, loss of adhesion or discoloration 2,000 hours UV exposure, type UV bulb, per ASTM G-53. No cracking, embrittlement, loss of adhesion or discoloration
Clean-up:	Water and mild soap

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 Hypalon or PVC: Any areas where Hypalon or PVC has torn, cracked and/or buckled must be repaired using similar products manufactured by GAF Materials Corporation. Any wet insulation must be replaced as part of the roofing repair. Allow at least 24 hours drying time before application of other TOPCOAT® products.
- 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

- 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 Hypalon or PVC substrate. Seams which are suspected of leaking shall also be sealed in this manner.
- 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 TOPCOAT® Membrane 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® at a rate of 1.0 gallon 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® at a rate of 1.5 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 20 mils field and 80 mils on roof penetration details and problem seams.