

TOPCOAT® Liquid-Applied Roofing Systems
TOPCOAT® System Specifications –
Hypalon® and PVC
(TOPGN160)

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*Quality You Can Trust...From
North America's Largest Roofing Manufacturer!™*

TOPCOAT® System Specifications – Hypalon® and PVC



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. GAF requires that a moisture scan be done by an independent source and requires it prior to issuance of GAF's limited 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 GAF must be used.

1.03 WARRANTY

Provide Weather Stopper® Integrated System Limited Warranty* 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® Roofing System for any given Hypalon® or PVC roof, please contact GAF's Technical Services Department.

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

1.04 REQUIREMENTS

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

PART 2 – PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

GAF

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 System Specs

A. TOPCOAT® Flashing Grade

TOPCOAT® Flashing Grade is a light gray, water-based, 100% acrylic synthetic rubber sealant that is applied to seams, fasteners, flashings, and penetrations prior to the application of the TOPCOAT® Membrane. Like the TOPCOAT® 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 ± 0.5 lbs
Viscosity (75°F):	600,000 ± 100,000 cps
Clean-Up:	Mineral Spirits, Toluene, Xylene

C. TOPCOAT® Flashing Fabric

TOPCOAT® Flashing Fabric is a stitchbond polyester 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) :	3.4
Average Tensile Strength per ASTM D5034:	74 lbs
Average Elongation at Break per ASTM D5034:	21.3%
Trapezoidal Tear Strength per ASTM D117:	13.5 lbs
Thickness per ASTM D1777:	.018

D. TOPCOAT® Membrane



TOPCOAT® Membrane is a water-based, 100% acrylic spray-applied liquid that cures to form a seamless elastomeric roofing membrane specially designed to seal the entire roof. TOPCOAT® Membrane (white only) 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 (white only). 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 :	<ul style="list-style-type: none">• 1,000 hours Atlas Weather-o-meter® exposure per ASTM D412, ASTM G26.• 1,500 hours Atlas Weather-o-meter® exposure per ASTM D412, ASTM G26. No cracking, embrittlement, loss of adhesion, or discoloration.• 2,000 hours UV exposure, type UV bulb, per ASTM G53. No cracking, embrittlement, loss of adhesion, or discoloration.
Tensile Strength:	150% of original
Elongation:	85% of original
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 GAF.
- 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. 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" TOPCOAT® Flashing 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 that 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 TOPCOAT® Flashing 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 gaps. 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 have elapsed, inspect the final roof surface for flaws, gaps, 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.