

# TOPCOAT<sup>®</sup> System Specifications – Plywood

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America's Largest Roofing Manufacturer!*<sup>™</sup>

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# TOPCOAT® System Specifications Plywood



## PART 1 – GENERAL

### 1.01 SYSTEM DESCRIPTION

The TOPCOAT® Roofing System can be applied on plywood roof substrates. This section addresses any unique aspects for this type of installation. Unless otherwise specified in this section, GAF Materials Corporation (GAFMC) standard specifications and Detail Drawings shall be used for installations on plywood roof substrates.

### 1.02 SUBSTRATE CONDITIONS

The TOPCOAT® Roofing System is to be applied over sound, plywood roof sheathing having the following specifications:

- 1) Thickness for single ply sheathing shall be a minimum of 3/4".
  - 2) Grade shall be structural exterior, Group 1.
  - 3) Finish veneers shall be minimum of CD PTS.
  - 4) GAFMC recommends that the plywood have a smooth-finished side because imperfections in the substrate may telegraph through the TOPCOAT® Elastomeric Roofing Membrane.
- A. The plywood deck must have a minimum slope of 1":12". Substrate should not pond water for a period longer than 48 hours after precipitation stops.
- B. The plywood deck must be mechanically attached with screws and metal plates of a size, type and finish needed to meet or exceed local codes.
- C. The TOPCOAT® Roofing System should not be used on heavy-traffic bearing substrates. If foot traffic is expected, cover the TOPCOAT® System where traffic will occur with an approved walkway system.

### 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.*

## 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. TOPESTER Reinforcing Fabric

TOPESTER Fabric is a non-woven, spun bonded 100% polyester web that must be used in conjunction with TOPCOAT® Flashing Grade, SB-900 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



## C. 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® 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 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 Gallo/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

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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  
Water and mild soap

Clean-up:

## **PART 3 – EXECUTION**

### **3.01 PREPARATION OF SUBSTRATE**

- A. Examine Substrate to receive new roofing. Do not proceed with new roofing until preparatory work has been completed or until unsatisfactory conditions have been corrected in a manner acceptable to GAFMC
- B. Pressure Washing: Substrate must be pressure washed with water. Use minimum working pressure of 2,000 psi to remove all dirt, dust and waste products (oil, oil-based roof cements, solvents, grease, animal fats, etc.).
- C. Substrate must be clean, dry, and free of debris before application of TOPCOAT® products.

### **3.02 APPLICATION**

- A. All seams, joints, roof penetrations, and stress areas must be treated with a 6" width (minimum) of TOPCOAT® Flashing Grade, one (1) layer of TOPESTER Fabric and a final layer of Flashing Grade to completely embed the Fabric. Smooth flashing areas with a trowel or brush to feather the Flashing Grade onto the plywood deck. Imperfections in the Flashing Grade may telegraph through the TOPCOAT® Elastomeric Roofing Membrane, compromising the final appearance.
- B. Fasteners: Encapsulate any exposed fasteners with TOPCOAT® Flashing Grade. Ensure the Flashing Grade is feathered neatly over and around the fasteners (for aesthetic purposes).
- C. 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.
- D. Spray-apply base coat (Gray) of TOPCOAT® Elastomeric Roofing Membrane 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.
- E. Spray-apply finish coat (White) of TOPCOAT® Elastomeric Roofing Membrane at a rate of 1.75 gallons per 100 sq.ft. Finish coat should not be applied unless the base coat is clean and dry and will provide proper adhesion.
- F. 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 28 mils field and 88 mils on flashing 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.