

Application Specification:

**GW-14-UHD
August 2019**

DIVISION 07 18 13: HEAVY DUTY PEDESTRIAN DECK SYSTEM GACOFLEX™ POLYURETHANE ELASTOMERIC COATING

PART 1 - GENERAL

1.1 SUMMARY

This section describes the requirements for installing a **heavy duty** liquid applied waterproofing, wear surface for deck surfaces over occupied space. Its intended use is suitable for residential and commercial foot traffic, patio furniture and similar equipment. This specification is not intended for use over on grade concrete surface without the use of a moisture mitigating sealer.

1.2 RELATED SECTIONS

- A. Cast-In-Place Concrete: Division 03 30 00
- B. Flashing and Sheet Metal: Division 07 60 00
- C. Drains, Vents, and Penetrations: Division 22 14 26.13

1.3 SUBMITTALS

- A. Product Data: Submit manufacturer's standard submittal package including specification, installation instructions, and general information for each waterproofing material.
- B. Applicator Qualifications: Submit current "Licensed Applicator" Certificate from the specified waterproofing manufacturer.
- C. Americans with Disabilities Act (ADA) Recommendations: Prior to installation, submit manufacturer's data indicating that the specified waterproofing application conforms to the provisions of the ADA Accessibility Guidelines as published by the US Access Board, 1331 F Street, NW, Suite 1000, Washington, DC 20004-1111.

1.4 QUALIFICATIONS

- A. Single Manufacturer: Primary waterproofing materials shall be products of a single manufacturer. The primary manufacturer shall recommend secondary materials. The primary manufacturer shall have a minimum of 10 years experience in the manufacture of materials of this type.
- B. Applicators shall have a minimum of 5 years experience in the application of waterproofing materials of the type specified. Applicator shall possess a current "Licensed Applicator" Certificate from the specified waterproofing manufacturer.



- C. Pre-Bid Conference: 10 working days prior to bid opening there is to be a mandatory Pre-Bid Conference. Anyone not attending the Pre-Bid Conference will not be allowed to bid the project. All products considered an equal to the specified product or any changes in the scope of work installation or specifications must be presented at the Pre-Bid Conference. If a change in the specifications is accepted, it will be considered as an alternate and will be presented as a bid amendment issued 5 working days prior to the bid opening. No other changes to specification or bid documents will be accepted.
- D. Materials other than those specified shall be submitted to the architect/owner for approval no later than ten days prior to the bid date. In requesting prior approval, it shall be necessary to submit:
 - 1. A letter of certification, signed by an officer of the manufacturer, stating the alternative material is equal to or
 - 2. Independent laboratory test data giving physical property values in comparison to the specified material.
- E. Pre-Installation Conference: Just prior to commencement of the fluid application waterproofing coating system, meet at the site with a representative of the coating manufacturer, waterproofing contractor, general contractor, architect and other parties affected by this section. Review the application methods and procedures, substrate conditions, scheduling and safety.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Store all coating materials in the original unopened containers at 50 to 80 °F (10 to 27 °C) till coating is ready for use.
- B. Follow the special handling or storage requirements of the manufacturer for cold weather, hot weather, etc.
- C. Safety: Refer to all applicable data, including, but not limited to SDS, PDS, product labels, specific instructions for specific personal protection requirements.
- D. Ventilation: Provide adequate ventilation to prevent the accumulation of hazardous fumes during application.
- E. Environmental requirements: Proceed with work of this section only when existing and forecasted weather conditions will permit the application to be performed in accordance with the manufacturer's recommendations.

1.6 JOB CONDITIONS

Substrate: Proceed with work of this section only after substrate construction and penetration work has been completed. **As conditions require, complete stucco removal 12" vertically at perimeter, new GSM deck to wall flashing, new door pans, deck replacement (as needed) etc. As a project requirement, install new min. 3/4" (19 mm) ACX plywood, or 1/4" (6.4 mm) GacoFlex™ A17 Gacocrete™ underlayment (where needed), after removal of existing membrane waterproofing.**

- A. Safety: Refer to all applicable data, including, but not limited to SDS, PDS, product labels and specific instructions for specific personal protection requirements.
- B. Ventilation: Provide adequate ventilation to prevent the accumulation of hazardous fumes during application.
- C. Weather: Proceed with the work of this section only when existing and forecasted weather conditions will permit the application to be performed in accordance with the manufacturer's recommendations.

1.7 WARRANTY

A warranty is available for commercial projects only. Contractor must be eligible for and make application to Gaco, prior to the start of the work under this section.



PART 2 - PRODUCTS

2.1 MANUFACTURERS

Acceptable Manufacturers:
Gaco Western: www.gaco.com

2.2 MATERIALS

- A. Sealer: GacoFlex E5691 Three-Component Epoxy Primer Sealer.
 - a. *Alternative Sealer*: For areas vulnerable high vapor drive seal with GacoFlex E5990 100% Solids Two-Component Epoxy Sealer.
- B. Primer: GacoFlex E5320 Two-Component Epoxy Primer (only if alternative E5990 Sealer is used).
- C. Polyurethane Base Coating: GacoFlex UB-64 Polyurethane Series Two-Component Coating. Physical Properties:

UB-64 SERIES BASECOAT		
PROPERTY *	ASTM TEST	VALUE (minimum)
Tensile Strength	D412	2,100 psi
Elongation	D412	400%
Hardness, Shore A	D2240	90
Tear Resistance	D624	375 lb
Water Absorption	D471	2%
Permeability	E96	.02"
Volume Solids	N/A	75%

- D. Polyurethane Top Coating: GacoFlex U66 Polyurethane Series Two-Component Coating. Physical Properties:

U-66 SERIES TOPCOAT		
PROPERTY *	ASTM TEST	VALUE (minimum)
Tensile Strength	D412	2,600 psi
Elongation	D412	300%
Hardness, Shore A	D2240	90-95
Tear Resistance	D624	400 lb
Water Absorption	D471	2%
Permeability	E96	.012"
Volume Solids	N/A	75%

- E. Flashing and Joint Reinforcing Fabric: Gaco Western 66B and 66S Polyester Tape. GacoFlex NF621 Neoprene Sheet Flashing and related materials as required for flashing drains, base angles, etc.
- F. Granule: GacoShell™ Granule, a hard (90 Rockwell Scale) non-crushable, non-extractable organic granule with a specific gravity of 1.3 Size 18/ 40 unless otherwise specified.
- G. Misc. Accessories: All items incorporated into this coating system shall be compatible with and approved by the coating manufacturer.



NOTE: Allow additional material for rough or irregular surfaces. Consult Gaco Western Technical Service for further inquiries.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify substrate is ready to receive work; surface is clean, dry and free of substances that could affect bond.
- B. Verify that the plywood shall conform to U.S. DOC PS 1 or CSA 0325 and shall carry the grade trademark of the Engineered Wood Association - APA AB EXT or APA AC EXT are acceptable. Underlayment grade plywood (APA AC EXT Underlayment) with solid, plugged cross bands under the face veneer is recommended for commercial installations. Refer to Gaco Western General Instruction "GW-2-3 Plywood Selection and Installation" for complete information on the installation and fastening of plywood.

Unacceptable Grades: APA C-D EXT, APA C-C EXT, Exposure 1 markings, oriented strand board (OSB), waferboard and Lauan or Mahogany plywood are **NOT** suitable substrates for liquid-applied coating systems. This is due to poor dimensional stability, weak glue lines which allow buckling or lifting of the top ply, and excessive splintered, leafed and raised surface grain.

- C. Do not begin the work until the concrete substrate has cured 28 days and/or has achieved a moisture content of no greater than 6.8%.
- D. Prior to application of waterproofing perform calcium chloride test, to verify a moisture content of 6.8% or less has been established.
- E. Verify the concrete meets the requirements of the coating manufacturer. Refer to Gaco Western General Instruction "GW-2-1 Curing and Drying of Concrete" for complete information on installation and finishing of concrete.
- F. Verify with architect, general contractor and manufacture that substrate conditions are acceptable to receive waterproofing application.

3.2 PREPARATION

- A. Clean substrate to remove all surface contaminants. Refer to Gaco Western General Instructions "GW-1-1 Surface Preparation", Surface Preparation.
- B. Mask off all adjoining areas that are not to receive the fluid applied waterproofing.
- C. Provide a suitable workstation to mix the coating materials.

3.3 INSTALLATION

- A. Technical Advice: The installation of this waterproofing membrane shall be accomplished in the presence of, or with the advice of the manufacturer's technical representative. Contact the nearest regional office for assistance.
- B. Concrete Sealer: Seal entire deck surface and all vertical or sloping surfaces of curbs, cants, parapets, etc., to receive coatings with one coat GacoFlex E5691 Primer Sealer at a rate of one gallon per 200 ft² (3.78 L / 18.6 m²). Allow to dry until nearly tack free where water has evaporated leaving a clear film before proceeding to next coat. Recoat window is approximately 2 hours (depending on temperature and humidity) to 28 days. No additional primer is necessary when sealing with GacoFlex E5691 Primer Sealer.



Alternative Concrete Sealer: For areas vulnerable to a high vapor drive seal with GacoFlex E5990 100% Solids Two-Component Epoxy Sealer. Use a squeegee to uniformly apply product over coverage area at a rate of one gallon per 150 ft² for CSP 3 190 ft² for CSP 2. Any excess product should be back rolled over entire area to ensure even application. Do not apply product if substrate is below 50 °F (10 °C) or above 110 °F (43 °C).

C. Concrete Primer: Only if alternative GacoFlex E5990 Sealer is used, apply one coat of GacoFlex E5320 Primer by roller at the rate of one gallon per 200 ft² (3.78 L / 23.2 m²). Allow 3 to 24 hours drying time. For maximum solvent resistance, see drying time directed in Gaco Western General Instructions "GW-2-2 Primer Systems for Various Substrates". Drying times vary depending on weather conditions such as temperature, humidity, and air movement.

D. Metal Primer: Apply one coat of GacoFlex E5320 Primer by roller at the rate of one gallon per 250 ft² (3.78 L / 23.2 m²). Allow 3 to 24 hours drying time.

NOTE: No primer required on new, clean and dry plywood.

E. Taping: Apply GacoFlex UB64 Polyurethane base coat or U66 Polyurethane by brush or roller in a 5" to 6" (123 mm to 152 mm) wide stripe coat centered over all joints, cracks and changes of plane to be taped. While this coat is still tacky, unroll GacoFlex 66B Tape into the coating and apply a top coat of GacoFlex Polyurethane over the GacoFlex 66B Tape smoothing out wrinkles and fishmouths.

NOTE: Allow curing a minimum of 1½ hour before proceeding to next step. On plywood substrates, taping application will require approximately ½ gallon per 100 ft² (1.25 to 1.89 L / 9.3 m²) of polyurethane coating.

F. Polyurethane Base Coat: Apply two coat of GacoFlex UB64 Polyurethane base coat or GacoFlex U-66 Polyurethane Series at a rate of 1½ gallons per 100 ft² (4.73 L / 9.3 m²), (30 dry mils) to all areas to receive fluid applied waterproofing, including areas previously caulked, flashed or fabric reinforced.

NOTE: Allow the base coat to cure completely, 8 hours minimum at 70 °F (21 °C).

G. Intermediate Coat and Texture: Apply GacoFlex UB-64 Polyurethane Base Coat or GacoFlex U66 Polyurethane Series by roller to secure a minimum coverage of one gallon per 100 ft² (3.78 L / 9.3 m²). (12 dry mils). While coating is still wet, broadcast GacoShell 18/40 granule at approximately 6 to 8 lb per 100 ft² (2.7 kg to 3.6 kg / 9.3 m²) one gallon (3.78 L) dry volume.

NOTE: Coat and sprinkle small areas at a time, taking care not to overlap coating and granule at edges. When texture coat is cured enough to walk on, lightly sweep away loose GacoShell granule. If GacoShell gets wet from rain allow 2 days of drying weather before proceeding with finish coat.

H. Finish Coat: Apply one coat of GacoFlex U66 Polyurethane by roller in a coat of the desired color over the granule at the minimum rate of 1.25 gallon per 100 ft² (3.78 L / 9.3 m²). The GacoShell granule must be totally encapsulated by this finish coat. (12 dry mils).

NOTE: To achieve a more uniform finish apply using two coats.

I. Optional Topcoat: After finish coat has cured a minimum of 24 hours, apply GacoFlex UA60 Aliphatic Polyurethane topcoat by roller at a minimum rate of ½ gallon per 100 ft² (1.89 L / 9.3 m²).

NOTE: Allow 48 hours before deck is put into use. In cool temperatures, a longer curing time may be required.

3.4 FIELD QUALITY CONTROL

The contractor shall maintain a quality control program specifically to verify compliance with this specification. A daily log shall be kept to record progress in the field.

A. Inspections: A minimum of three (Substrate, Application and Final) Inspections, by an approved manufacturer's representative, will be required on all projects requiring a warranty.



- B. Thickness: Minimum over all dry film thickness of the completed fluid applied waterproofing, excluding GacoShell, will average 60 mils. Thickness including GacoShell will average approximately 64 mils. The optional topcoat will add approximately 5 mils of polyurethane coating to the coating system.

