

Application Specification:

GW-13-U
July 2009
Supersedes 5/06

Section 07572: GACOFLEX POLYURETHANE ELASTOMERIC COATING SYSTEM FOR TROWEL APPLICATION ON PLYWOOD AND CONCRETE DECKS

PART 1 - GENERAL

1.1 SUMMARY

- A. This section describes the requirements for installing a liquid applied waterproof, 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.

1.2 RELATED SECTIONS

- A. Cast-In-Place Concrete: Section 03300
- B. Flashing and Sheet Metal: Section 07600
- C. Drains, Vents, and Penetrations: Section 07700

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 "Qualified Applicator" certificate from the specified waterproofing manufacturer.
- C. Americans with Disabilities Act (ADA) Recommendations: Prior to installation, submit manufacturers 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 St. NW, Suite 1000, Washington, DC 20004-1111.

1.4 QUALIFICATIONS

- A. Primary waterproofing materials shall be products of a single manufacturer. Secondary materials shall be recommended by the primary manufacturer. 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 "Qualified Applicator" certificate from the specified waterproofing manufacturer.
- C. Pre-Bid Conference: Ten 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

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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. Pre-Installation Conference: Just prior to commencement of the fluid application waterproofing system, meet at the site with a representative of the coating manufacturer, the waterproofing contractor, the general contractor, the architect and other parties affected by this section. Review methods and procedures, substrate conditions, scheduling and safety.
- E. The static coefficient shall exceed the minimum recommendations of the American Disability Act (ADA), for accessible routes, for wet and dry surfaces, and for leather and rubber heel materials.

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) until 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 MSDS sheets, PDS sheets, 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 WARRANTY

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

PART 2 - PRODUCTS

2.1 MANUFACTURERS

Acceptable Manufacturers:
Gaco Western

2.2 MATERIALS

- A. Primer/Sealer: Polyurethane Concrete Primer GacoFlex U-5677 and GacoFlex E-5320 two component Epoxy Concrete Sealer.

Alternative Primer/Sealer: Zero VOC Primer/Sealer GacoFlex E-5511 two component 100% solids Epoxy Concrete Primer/Sealer.
- B. Polyurethane Base Coating: GacoFlex UB-64 Series two component coating.
- C. Polyurethane Top Coating: GacoFlex U-66 Series two component coating.
- D. Flashing and Joint Reinforcing Fabric: Gaco Western 66B and 66S fabric. GacoFlex NF-621 neoprene sheet flashing, and related materials as required for flashing drains, base angles, etc.
- E. Granule: GacoShell Granule, a hard (90 Rockwell Scale) non-crushable, non-extractable organic granule with a specific gravity of 1.3 Size 18 on 40 unless otherwise specified.
- F. Misc. Accessories: All items incorporated into this system shall be compatible with and approved by the coating manufacturer.

Note: Allow additional material for rough or irregular surfaces add 2% - 3% for material loss during application.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that 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. Product Standard PS 1-95 and shall carry the grade trademark of The Engineered Wood Association - APA 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.

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.

Refer to Gaco Western's General Instruction GW-2-3 for complete information on the installation and fastening of plywood.

- C. Do not begin work until concrete substrate has cured 28 days, minimum.
- D. Verify that the concrete meets the requirements of the coating manufacturer. Refer to Gaco Western's General Instruction GW-2-1 for complete information on the installation and finishing of concrete.
- E. Verify that all other work involved with this area, done under other sections, has been completed and accepted by the architect and general contractor prior to starting the waterproofing application.

3.2 PREPARATION

- A. Clean substrate to remove any and all surface contaminants. Refer to Gaco Western's General Instructions GW-1-1, 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.

NOTE: For ICC requirements follow procedure 3.4.

- B. Concrete Primer/Sealer: Prime entire deck surface and all vertical or sloping surfaces of curbs, cants, parapets, etc., which are to receive coatings with one coat GacoFlex U-5677 Sealer at a rate of one gallon per 300 square feet (3.78 L / 27.9 m²). Allow to dry a minimum of 1 hour and no more than 24 hours before applying sealer coat.

Apply one coat of GacoFlex E-5320 by roller at the rate of one gallon per 250 square feet (3.78 L / 23.2 m²). Allow 3 to 24 hours drying time. For maximum solvent resistance, see drying time directed in Gaco Western's General Instructions GW-2-2. Drying times vary depending on weather conditions such as temperature, humidity and air movement.

Alternative Concrete Primer/Sealer: Apply one coat of GacoFlex E-5511 to all surfaces to receive the fluid applied waterproofing. Apply at a rate of one gallon per 150 sq. ft. (3.78 L / 13.9 m²) and allow to cure at least 6 hours, but no more than 3 days before applying the basecoat.

- C. Metal Primer: Prime metal surfaces according to Gaco Western "Primer Recommendation Chart."

Note: New, clean and dry plywood does not need a primer.

- D. Taping: Apply GacoFlex UB-64 or U-66 polyurethane by brush or roller in a five to six inch (12.70 cm to 15.24 cm) wide stripe coat centered over all joints, cracks and changes of plane to be taped. While this coat is still tacky, unroll 66B tape into the coating and apply a coat of polyurethane over the tape smoothing out wrinkles. Allow to cure a minimum of 1½ hours before proceeding to next step. On plywood substrates, taping application will require approximately 1/3 to 1/2 gallon of polyurethane coating per 100 square feet (1.25 to 1.89 L / 9.3 m²).
- E. Polyurethane Base Coat: Apply one coat of GacoFlex UB-64 or U-66 Series polyurethane at a rate of 1½ gallons per 100 sq. ft. (5.68 L per 9.3 m²), (24 mils wet (.61 mm)) to all areas to receive fluid applied waterproofing, including areas previously caulked, flashed or fabric reinforced. Allow the base coat to cure completely (8 hours minimum at 70°F (21°C)).
- F. Troweling Mix: Prepare one unit of trowel mix by thoroughly blending two gallons (7.57 L) of GacoFlex U-66 with 1.25 gallons (4.73 L) (7.5 pounds (3.4 kg)) GacoShell granule. Apply one unit of troweling mix per 133 square feet (12.4 m²) in accordance with GW-4 Troweling Instructions. (1½ gallons (5.68 L) GacoFlex U-66 plus granule will cover 100 square feet (9.3 m²)). Allow to dry a minimum of 24 hours before walking on surface. In poor drying conditions, more time will be required.

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

3.4 ICC ESR-1284 INSTALLATION

- A. Polyurethane Base Coat: Apply one coat of GacoFlex UB-64 Series polyurethane at a rate of 1½ gallon per 100 sq. ft. (5.68 L per 9.3 m²), (24 mils wet (.61 mm)) to all areas to receive fluid applied waterproofing, including areas previously caulked, flashed or fabric reinforced. Allow the base coat to cure completely (8 hours minimum at 70°F (21°C)).
- B. Troweling Mix: Prepare one unit of trowel mix by thoroughly blending 2 gallons (7.57 L) of GacoFlex UB-64 with 1.25 gallons (4.73 L) GacoShell granule (7.5 pounds (3.4 kg)). Apply one unit of troweling mix per 133 square feet (12.4 m²) in accordance with GW-4 Troweling Instructions. (1½ gallons (5.68 L) GacoFlex UB-64 plus GacoShell will cover 100 square feet (9.3 m²)). Allow to dry a minimum of 24 hours before walking on surface. In poor drying conditions, more time will be required.
- C. Topcoat: Apply one coat of GacoFlex U-66 applied at a rate of ½ gallon per 100 square feet (1.89 L / 9.3 m²).

3.5 FIELD QUALITY CONTROL

- A. The contractor shall maintain a quality control program specifically to verify compliance with this specification. A daily log shall be kept to record actions in the field.
- B. 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.
- C. Thickness: Minimum over all dry film thickness of the completed fluid applied waterproofing; excluding GacoShell will average 36 mils (.91 mm). Thickness including GacoShell will average approximately 45 mils (1.14 mm).