

Application Specification:

GW-14-UA
July 2009
Supersedes 11/06

Section 07572:

GACOFLEX CRYSTAL DECK POLYURETHANE ELASTOMERIC COATING SYSTEM FOR ROLLER APPLICATION ON PLYWOOD AND CONCRETE DECKS

PART 1 - GENERAL

1.1 SUMMARY

- A. This section describes the requirements for installing a liquid applied, high solids, two component, chemically curing, fire retardant, decorative traffic bearing surface intended for use as an elastomeric deck surface, or similar application. This specification is not intended for use over on grade concrete.

1.2 RELATED SECTIONS

- A. Cast-In-Place Concrete: Section 03300
- B. Rough Carpentry: Section 06100
- C. Flashing and Sheet Metal: Section 07600

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.

1.4 QUALIFICATIONS

- A. Primary waterproofing materials shall be products of a single manufacturer. The primary manufacturer shall recommend secondary materials. 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: 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.

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- 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.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Store all coating materials in the original unopened containers at 50°F - 80°F (10°C - 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, and 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 V.O.C. primer/sealer GacoFlex E-5511 two-component, 100% solids epoxy.*
- B. GacoFlex Aggregate: GacoFlex aggregate is quartz aggregate, available in solid, or pre-blended colors.
- C. Polyurethane Coatings: GacoFlex U-64 Series, U-66 Series and UB-6407 two-component coatings.
- D. Polyurethane Coating: GacoFlex UA-7090 a high solids, two component, fire retardant, chemically curing polyurethane elastomer for multi-step application resulting in a waterproof, durable, non slip, traffic bearing surface designed for pedestrian traffic. Service temperatures range from 0°F to 150°F (-18°C to 66°C) minimum application temperature is 40°F (4°C) minimum.
- E. Flashing and Accessories: Gaco Western 66B fabric reinforcing, GacoFlex NF-621 neoprene sheet flashing, and related materials as requires for flashing drains, base angles, etc.

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. Refer to Gaco Western's General Instruction GW-2-3 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 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 the substrate, removing all surface contaminants. Refer to Gaco Western's General Instruction GW-1-1, Surface Preparation.
- B. Prime all concrete and metal surfaces to receive flashing and detail work. Most wood substrates do not require priming.
- C. Fill voids, seal joints, and apply bond breaker as required.
- D. Mask off all adjoining areas that are not to receive the fluid applied waterproofing to prevent spillage outside membrane area.
- E. 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 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 drying a minimum of 1 hour and no more than 72 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 Instruction GW-2-2, Priming. Drying times vary depending on weather conditions such as temperature, humidity and air movement.

Alternative Primer Sealer: Apply one coat of GacoFlex E-5511 to all surfaces to receive fluid applied waterproofing, except areas previously caulked, flashed, or fabric reinforced. Apply at a rate of one gallon per 150 square feet (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. Taping: Apply 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 and fishmouths.

Allow curing a minimum of 1½ hour before proceeding to next step. On plywood substrates, taping application will require approximately 1/3 to 1/2 gallon per 100 square feet (1.25 to 1.89 L / 9.3 m²) of polyurethane coating.

- D. Neoprene Sheet: On expansion and seismic joints, install GacoFlex NF-621 field curing neoprene sheet flashing. At perimeter terminations, install field curing neoprene sheet, and perform detail work in accordance with manufacturer's instructions, and as required by project documents and drawings. Drains, base flashing, and perimeters should be addressed at this time. Typically, use 6+(15.24 cm) width, 3+(7.62 cm) up, and 3+(7.62 cm) out. Use a suitable urethane sealant to filet sheet edges, prior to coating.
- E. Basecoat: Apply one coat of GacoFlex UB-6407 polyurethane coating at a rate of one gallon per 100 square feet (3.78 L / 9.3 m²) to secure a dry film thickness of not less than 12 mils (.30 mm).
- F. Color Coat: Apply one coat of GacoFlex U-6402 pewter gray at a rate of 1 gallon per 100 sq. ft. (3.78 L / 9.3 m²).
- Alternate Colors: Apply one coat of U-66 Series in the desired color at a rate of 1 gallon per 100 sq. ft. (3.78 L / 9.3 m²).
- G. Wear Course: Apply a coat of GacoFlex UA-7090 series Aliphatic Polyurethane at the rate of ¾ gallon per 100 sq. ft. (2.84 L / 9.3 m²). GacoFlex UA-7090 can be thinned up to 10% with GacoFlex thinner T-5110 to extend the pot life for achieving a uniform application. Into wet coating, immediately broadcast GacoFlex granules to refusal. This will consume 25 to 30 pounds per 100 square feet (11.3 to 13.6 kg per 9.3 m²). Allow drying overnight.
- H. Optional Additional Wear Course: In order to achieve uniformity of color over large areas, a second wear course may be installed. Apply a coat of GacoFlex UA-7090 series Aliphatic Polyurethane at the rate of ¾ gallon per 100 sq. ft. (2.84 L / 9.3 m²). GacoFlex UA-7090 can be thinned up to 10% with GacoFlex thinner T-5110 to extend the pot life for achieving a uniform application. Into wet coating, immediately broadcast GacoFlex granules to refusal. This will consume 25 to 30 pounds per 100 square feet (11.3 to 13.6 kg per 9.3 m²). Allow drying overnight.
- I. Polyurethane Finish Coat: Sweep unattached granule and apply GacoFlex UA-7090 series aliphatic polyurethane at the rate of ¾ gallon per 100 square feet (2.84 L / 9.3 m²).

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

3.4 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 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 granule, will average 38 mils (.96mm). Thickness including granule will average approximately 53 mils (1.35mm).