



Application Specification:

CONC-UB64-24-10

Rev:1/2020

DIVISION 07 14 16: GACOFLEX™ UB64 MEMBRANE FOR USE ON CONCRETE

PART 1 - GENERAL

1.1 SUMMARY

GacoFlex UB64 Series Elastomeric Coatings provide a waterproofing membrane suitable for use on properly primed concrete (e.g. cast-in-place) substrates. This section includes membrane installation and protection board / drainage mat. For No-VOC applications, GacoFlex UB64C Series Elastomeric Coatings is available.

This specification is prepared in brief form so it can be used verbatim in the waterproofing section. It is necessary only to make the selections indicated to complete it. Gaco's General Instructions, which are incorporated by reference, provide specific detailed instructions for the guidance of contractors and inspectors.

1.2 RELATED SECTIONS

A. Cast-In-Place Concrete:	Division 03 30 00
B. 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 Letter of Good Standing from the specified waterproofing manufacturer.
- C. **Warranty Specifications:** Warranty must be supplied by product manufacturer.
- D. **Substrate Conditions:**
 - 1. Applicator to present to owner a completed inspection form verifying substrate condition and any noted defects not specifically addressed regarding the installation of the coating.
 - 2. Surface shall be free from loose dirt, stone, debris, moisture, and shall be in stable condition. Any work on the area to receive this application shall be completed prior to the installation of the coating.
 - 3. Applicator shall complete a substrate inspection prior to the start of the installation of the coating. The architect/owner and applicator shall accept the substrate. Start of the work constitutes acceptance.

1.4 QUALIFICATIONS

- A. **Material Requirements:** Primary waterproofing materials shall be the products of a single manufacturer. Secondary materials shall be recommended by the primary manufacturer. The manufacturer shall have a minimum of 10 years' experience in the manufacture of materials of this type.
- B. **Applicator Experience:** Applicators shall have a minimum of five (5) years' experience in the application of waterproofing materials of the type specified. The Applicator shall possess a current Letter of Good Standing from the specified waterproofing manufacturer.
- C. **Pre-Bid Conference:** Ten (10) working days prior to the bid opening there is to be a mandatory Pre-Bid Conference. Those 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 addendum issued five (5) working days prior to the bid opening. No other changes to the specification or bid documents will be accepted.
- D. **Non-Specified Material Approval:** Materials other than those specified shall be submitted to the architect/owner for approval no later than ten (10) 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 that the alternate material is equal to or better than the specified product.
 - 2. Independent laboratory test data giving physical property values in comparison to the specified material.
- E. **Pre-Installation Conference:** Just prior to the commencement of the installation, meet at the job-site with a representative of the coating manufacturer, Applicator, general contractor, architect, and other parties affected by this section. Review the methods and procedures, substrate conditions, scheduling, and safety.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Owner/owner's representative shall reject damaged or non-conforming materials. Rejected materials must be removed immediately from the job site.
- B. Store the coating materials as recommended by the manufacturer and conforming to applicable safety regulatory agencies: town or city, state, and federal. Refer to all applicable data including, but not limited to: Safety Data Sheets, Product Data Sheets, product labels, and specific instructions for personal protection.
- C. Provide adequate ventilation, protection from hazardous fumes, and overspray potential to workers and associated trades near of the site application.

1.6 WARRANTY

- A. Manufacturer warrants that the material supplied will meet or exceed physical properties as published. The Applicator guarantees that workmanship will be free of defects in coating application. Since performance of previously applied coatings is beyond the control of Manufacturer and Applicator, requests for additional warranty coverage shall be subject to prior approval by Manufacturer.
- B. Warranty must be supplied by product manufacturer.

C. Protection of building and occupants:

1. All surfaces not to receive the coating specified shall be protected from overspray hazard, e.g., windows, doors, exterior surfaces and facades, parking lots, and vehicles. Protective coverings shall be secured against wind and shall be vented if used in conjunction with applications preventing collection and moisture.
2. Applicator to post signs noting potential overspray hazard within **400' (121.9 m)** of applications.
3. All air intake ventilation equipment shall be turned off to prevent fumes from entering building.
4. Surfaces damaged during application shall be restored at no expense to the owner.
5. No smoking signs to be posted as mandated by local fire officials.

D. Substrate: Proceed with work as specified only after substrate construction, preparation, and detail work has been completed.

E. Equipment: All equipment used during operations shall be located so as not to adversely affect the daily operations or endanger occupants, structure, or materials on-site. All spray equipment must be grounded during operations.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

Acceptable Manufacturers:

Gaco www.gaco.com

2.2 MATERIALS

COMPONENT		SPECIFICATION					
Joint Reinforcing Fabric		Gaco 66B and 66S Fabric Tape					
Sealer/Primer		GacoFlex E5691 Three-Component Sealer/Primer <i>Alternative Sealer:</i> FOR AREAS VULNERABLE HIGH VAPOR DRIVE 1) SEAL with GacoFlex E5990 100% Solids Two-Component Epoxy Sealer 2) PRIME with GacoFlex E5320 Two Component Epoxy Primer					
Flashing		GacoFlex NF621 Neoprene Sheet Flashing and related materials as required for flashing drains, base angles, etc.					
Coating		GacoFlex UB64 Two-Component Polyurethane Coating <i>UB64C *Identical material properties except VOC</i>					
		PROPERTY		TEST METHOD		VALUE	
		Tensile Strength		ASTM D412	2100 ± 100 psi (14.48 ± 69 MPa)	ASTM D3137 Change in % after exposure, Hydrolytic Stability 6 months @ 100 °F (38 °C)	196%
		Elongation			400% ± 25%		-3%
		Permanent Set at Break			15% max		-8%
		Solids	Weight	METHOD 4041 FED STD 141	83.5% ± 1%		
			Volume		75.0% ± 1%		
		VOC		D3960	UB64	222 g/L	
					UB64C	n/a	
		Hardness		D2240	90 ± 5 Shore A		
		Water Absorption		D471, 24 hours R.T	2%		
		Water Vapor Permeability		ASTM E-96 Procedure B Max. 100% RH difference @ 23 °C	0.02 perm inches		

PART 3 - EXECUTION

3.1 EXAMINATION

- A. 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%.
- B. Prior to application of waterproofing perform calcium chloride test, to verify a moisture content of 6.8% or less has been established.
- C. Verify that the concrete meets the requirements of the coating manufacturer. Refer to Gaco's General Instruction GW-2-1: Curing and Drying of Concrete for complete information on the installation and finishing of concrete.
- D. Verify with architect, general contractor and manufacture that substrate conditions are acceptable to receive waterproofing application.

3.2 PREPARATION

- A. Clean the substrate to remove any and all surface contaminants. Refer to Gaco'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 work station 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 the entire surface and all vertical or sloping surfaces of curbs, cants, parapets, etc., which are to receive coatings with one coat GacoFlex E5691 Primer Sealer at a rate of 1 gal / 400 ft² (3.78 L / 37.2 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 two (2) hours (depending on temperature and humidity) to twenty-eight (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 1 gal / 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 or above 110 °F.

- C. **Concrete Primer:** Only if alternative GacoFlex E5990 Sealer is used, apply one coat of GacoFlex E5320 Primer by roller at the rate of 1 gal / 400 ft² (3.78 L / 37 m²) as soon as it is thoroughly dry. This level dryness can be achieved in as little as two hours but may require as long as six hours depending on temperature.
- D. **Polyurethane Coating:**
**IMPORTANT: All installation steps for GacoFlex UB64C are identical to GacoFlex UB64.* Apply two coats of GacoFlex UB64.Series Polyurethane at a rate of 1.5 gal / 100 ft² (5.7 L / 9.3 m²) to yield 32 WFT / 24 DFT for all areas to receive the fluid applied waterproofing, including areas previously caulked, flashed or fabric reinforced. Allow the base coat to cure for at least 2 hours.

E. Finish Coat Polyurethane Coating:

**IMPORTANT: All installation steps for GacoFlex UB64C are identical to GacoFlex UB64. Apply one coat of GacoFlex UB64 Series Polyurethane Coating at a rate of 1.5 gal / 100 ft² (5.7 L / 9.3 m²) to) to yield 32 WFT / 24 DFT for all areas to receive the fluid applied waterproofing, including areas previously caulked, flashed or fabric reinforced.*

NOTE: Allow each coat to dry until tack free and dry enough for foot traffic without damage before applying additional coats. Several hours to overnight will be required, depending on the drying conditions. In periods of extreme high temperatures or in direct sunlight, use caution as dark colors absorb heat quickly and may cause coating to blister or exhibit other film defects.

NOTE: If the entire job cannot be completed without interruption, the interruption should occur after the first base coat has been applied. This will provide protection for the tape system and general areas. It is best to schedule the installation to avoid interruptions. If they occur, cleaning is essential to assure adhesion.

- F. **Water Test:** Prior to being covered with overburden, perform a water test after forty-eight (48) hour. Cover all horizontal surfaces with water to a depth of 2" and allow it to stand for a minimum of twenty-four (24) hours. If leaks are detected, repair and re-test as necessary. Obtain a sign off from the Owner or General Contractor as to watertight integrity after the water test.

3.4 PROTECTION

Drainage Mat: If a drainage mat is to be used, Install on the cured membrane (post water test) a layer of composite drainage system consisting of a three-dimensional, crush-proof drainage core and a non-woven needle punched filter fabric. This composite is tested to meet or exceed the following properties:

3.5 FIELD QUALITY CONTROL

- A. **QC Documentation:** The contractor for work under this section 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. **Thickness Requirement:** Minimum over all dry film thickness of the completed fluid applied waterproofing system will average 60 mils.