



INSTALLATION SPECIFICATION

URADEK SYSTEM # 65-HT-SC*

PEDESTRIAN TRAFFIC BEARING WATERPROOFING SYSTEM

1. GENERAL

1.1 Scope: This specification covers the installation of a durable, fluid-applied, abrasion resistant polyurethane pedestrian deck coating system which is designed with high tensile strength (HT) urethane base coat and top coats. It is a monolithic system, designed to seal the concrete slabs from deicing or marine salts and moisture penetration. This traffic bearing waterproofing system incorporates excellent adhesion, impact resistance and abrasion resistance. This waterproofing system is also available with a high tensile strength aromatic urethane topcoat.

1.2 Work Included: Install waterproofing consisting of caulking and flashing reinforcement for joints, URADEK 7012 or 7119 Epoxy Primer, URADEK 7014 Series High Strength Elastomeric Membrane and URADEK 7016-AL-SC High Strength Urethane Top Coat. Apply in accordance with these specifications and latest general instructions supplied by Urethane Polymers International, Inc. (UPI).

1.3 Work Not Included: Work under this section shall not include finishing and corrective work in connection with the surfaces which are to receive the fluid-applied coating system. Nor does it include furnishing and installation of metal flashing, drains, curbs or any other penetration through the deck.

1.4 Condition of Concrete Surfaces:

1.41 The concrete surfaces shall be of sound structural grade (3000 psi compressive strength recommended), of adequate design and thickness for pedestrian traffic, and shall have a steel troweled followed by a fine broom finish, free of fins, ridges, voids or air entrained holes.

1.42 Concrete shall be cured by water curing method or a solution of pure sodium silicate. Curing compounds or curing agents of any type shall not be used unless they have prior approval from UPI.

1.43 Concrete shall be cured at least 28 days and shall be sloped for proper drainage.

1.44 Saw-cut control joints and/or expansion joints shall be properly installed at strategic points throughout the field of the deck to control cracking caused by deflection and shrinkage.

1.45 Any required crickets or drains should be installed at the time the main deck is poured (i.e. monolithic).

1.46 Voids, rock pockets and excessively rough surfaces shall be repaired with epoxy grout or ground to match the unrepaired areas.

1.47 When metal decking is used as the concrete form, it shall be of the "ventilating type".

1.48 All concrete decks poured over precast "T's", planks or slabs, shall have control joints placed directly over all corresponding joints or openings in the precast units.

1.5 Job Conditions:

1.51 Before any waterproofing work is started the waterproofing applicator shall thoroughly examine all surfaces for any deficiencies. Should deficiencies exist, the owner, or general contractor shall be notified in writing and application shall not begin until corrections are made.

1.52 Do not proceed with application of materials when deck temperature is less than 40°F or if precipitation is imminent.

1.53 Warn personnel against breathing of vapors and contact of material with skin or eyes. In confined areas, workmen shall wear the appropriate MSHA/NIOSH approved respiratory protective gear and protective clothing.

1.54 All gas flames and electrical apparatus shall be shut down prior to the start of and during coating application and curing.

1.55 Protect plants, vegetation, and animals which might be adversely affected by the coating operation.

1.56 URADEK Elastomeric Coating Systems should not be installed onto on-grade slabs, split slabs with buried membrane or onto slabs over unvented metal pans without prior approval from UPI.

2. QUALIFICATIONS

2.1 Waterproofing Applicator:

2.11 The waterproofing applicator shall be experienced in successfully applying the same or similar materials and shall be specifically approved as a Factory Qualified Applicator in writing by UPI.

2.12 The waterproofing applicator shall be financially responsible and be ready and able to submit any required project warranty.

2.13 The waterproofing applicator shall submit to the general contractor and the building owner the required certificates of insurance prior to starting the project.

2.2 Sample Submittals: Submit samples not less than 3" X 4" in size, showing the approximate applied thickness, texture and color. The submittal shall also include the manufacturer's application-specification sheet and a list of materials by name and quantity to be used on this project.

3. MATERIALS

The materials shall be delivered to the job site in the original sealed containers bearing the product name, color, manufacturer's lot number, directions for use and precautionary labels.

3.1 Caulking Compound: Shall be a one-component or two-component polyurethane compound supplied or approved by UPI.

3.2 Flashing Reinforcement: Shall be non-staining, uncured neoprene sheet at 45-60 mils thickness, woven polyester reinforcing fabric, or other suitable reinforcement as recommended by UPI.

3.3 Primer: Shall be UI-7012-SC water-based (or UI-7119 solvent-based) Epoxy-Polyamide, low viscosity, two-component primer/sealer.

3.4 Elastomeric Membrane: Shall be UI 7014-single-component, high adhesion, moisture cured, elastomeric polyurethane membrane and shall meet or exceed the following typical properties:

URADEK 7014 Elastomeric Membrane

PROPERTY	TYPICAL VALUE	TEST METHOD
Composition	Aromatic Urethane	
Weight Solids	92 ± 2%	
VOC Content	Less than 100 gm/l	Calculated
Hardness, Shore A	75 ± 5	ASTM D-2240
Tensile Strength	1350 ± 150 psi	ASTM D-412
Ultimate Elongation	450 ± 50%	ASTM D-412
Tear Resistance	200 ± 50 lb./in.	ASTM D-1004
Weather Resistance	Slight Chalk @ 1000 hours	ASTM G-23
Adhesion to Primed Concrete	30 pli	ASTM D-903

3.5 Traffic Resistant Top Coat: Shall be URADEK 7016-AL-SC single component, high tensile strength, abrasion resistant and weather-resistant polyurethane coating and shall meet or exceed the following typical performance properties:

URADEK 7016-AL-SC Top Coat

PROPERTY	TYPICAL VALUE	TEST METHOD
Composition	Aliphatic, Saturated Polyester Urethane	
Weight Solids	82 ± 2%	
VOC Content	Less than 100 gm/l	Calculated
Hardness, Shore A	90 ± 5	ASTM D-2240
Tensile Strength	3000 ± 300 psi	ASTM D-412
Ultimate Elongation	200 ± 50%	ASTM D-12
Tear Resistance	300 ± 50 lb./in.	ASTM D-1004
Water Permeability	Less than 0.1 Perm	ASTM E-96
Weather Resistance	No Chalking @ 2000 hrs. Negligible Change, CS-17 wheels, 1000 cycles, 1000 gm. load	ASTM G-23
Abrasion Resistance		ASTM C-501

3.6 Aggregate: Shall be rounded, non angular 20 mesh and 30 mesh flint shot silica, or equivalent washed and kiln-dried aggregate. Aggregate shall be hard and stable to anticipated use conditions.

4. SUBSTRATE PREPARATION

4.1 Concrete Surfaces:

4.11 The concrete surface must be thoroughly clean, dry and free from any surface contaminants or cleaning residue. Acceptable methods of cleaning are shot-blasting, sandblasting, or mechanical grinding followed by the complete and thorough removal of any residue.

4.12 All cracks over 1/16 inch in width and all moving cracks under 1/16 inch in width shall be routed out to ¼ inch minimum in width and depth and filled flushed with polyurethane elastomeric sealant.

4.13 All cracks shall be stripe-coated with 25 mils of URADEK 7014 Detail Membrane for a distance of 2 inches on either side of the crack.

4.14 Apply a ¾ inch cant of sealant around all pipes, drains and vertical junctions.

4.15 All expansion and contraction joints shall be cleaned, primed, fitted with a backing rod and caulked with elastomeric polyurethane sealants. Joints ½ inch or less in width and all caulked cracks shall be stripe-coated with a 25 mil preparatory coat of URADEK 7014 Detail Membrane.

4.16 Prior to commencing with the application, all surfaces to be coated shall be dry and free from any surface contaminants or cleaning residues.

4.2 Flashing Reinforcement:

4.21 All required metal, neoprene, and polyester flashing reinforcement shall be installed at this time. All sealant cants should be installed.

4.22 All metal shall be delivered with galvanizing treatment and epoxy shop primer and then be field primed with URADEK 7012 OR 7118 Primer prior to coating with the base membrane. (For metal surfaces which may exhibit adhesion difficulties, first prime with a zinc rich epoxy primer.)

4.23 URADEK 7014 Base Membrane is used as an adhesive for the polyester reinforcing fabric. The flashing fabric shall be laid into the wet base membrane with roller, brush or broad blade knife. The fabric shall be laid relaxed, smooth and wrinkle-free and over-coated with base membrane.

4.24 Flashing shall be coated (with base coats and top coats) each time the deck is coated.

4.3 Priming: Stir each side of Primer separately and then mix all of Part A with all of Part B. Use a mixing paddle on a slow speed drill motor. Mix thoroughly for 2 to 3 minutes. (Let mixed UI-7012 water-based primer sit 30 minutes after mixing and before applying).

5. APPLICATION OF MEMBRANE

5.1 Primer: Apply UI-7012-SC or UI-7119 Epoxy Primer at the approximate rate of 250-350 square feet per gallon. (The choice of primer and surface porosity will determine optimum application rate). Allow primer to dry until it is tack-free. Within 8 hours of application of the primer, the base coat must be applied. If the base coat can't be applied within 8 hours, or if the primer is contaminated by rain, then reprime.

5.2 URADEK 7014 Series Base Membrane shall be squeegee or trowel and roller applied in one uniform coat at the rate of one gallon per 65 square feet or as needed in order to obtain a minimum wet film thickness of 25 mils. Allow 16 to 24 hours curing time @ 77°F before applying the next coat. Do not apply coating system over joints greater than ½ inch wide. (If the base or elastomeric membranes should

become dirty or contaminated, or lose their surface tack, wipe clean with xylene.)

5.3 URADEK 7014 Series Elastomeric Membrane shall be squeegee or trowel and roller applied in one uniform coat at the rate of one gallon minimum per 125 square feet in order to obtain a minimum wet film thickness of 13 mils. While the coating is still fluid, uniformly broadcast and thoroughly encapsulate 20/40 mesh aggregate into the coating at the rate of 20-30 lbs. per 100 square feet. Allow 16 to 36 hours curing time @ 77°F before removing excess aggregate and applying the Top Coat.

5.4 URADEK 7016-AL-SC Top Coat shall be flat squeegee applied and uniformly backrolled in one uniform coat at the rate of one gallon minimum per 125 square feet in order to obtain a minimum wet film thickness of 13 mils and to completely coat the aggregate.

5.5 Heavy Duty Traffic Area:

5.51 After application in accordance with Sections 5.1, 5.2 URADEK 7014-HT Elastomeric Membrane shall be squeegee and roller applied in one uniform coat at the rate of one-gallon per 100 square feet (16 wet mils). While the coating is still fluid, uniformly broadcast 20/30 mesh aggregate at the approximate rate of 25-35 lbs. of aggregate per 100 square feet. Allow 16 to 36 hours curing time before applying the Top Coat.

5.52 **URADEK 7016-AL-SC Top Coat** shall be flat squeegee and roller applied in one uniform coat at the rate of one gallon minimum per 100 square feet in order to obtain an average wet film thickness of 13 mils and to completely coat the aggregate.

5.6 Thickness: Excluding the encapsulated aggregate, the Pedestrian Traffic Coating thickness shall be a minimum of 42 dry mils (1.05 mm). The coating thickness in the Heavy Duty Traffic Areas shall be a minimum of 47 dry mils (1.18mm) exclusive of aggregate.

6. APPLICABLE STANDARDS/SPECIFICATIONS

This Traffic Bearing Coating System complies with applicable Federal EPA VOC regulations, Mid Atlantic Ozone Transportation Corridor VOC regulations, the applicable California regional air quality regulations and meets the performance requirements of ASTM C-957, High Solids Content, Cold Liquid Applied Elastomeric Waterproofing Membrane with Integral Wearing Surface.

7. GUARANTEE / WARRANTY

When this Elastomeric Coating System is installed by a Factory Qualified Applicator, is inspected and approved in accordance with these specifications, and after receipt of the final payment, the Factory Qualified Applicator shall issue their customary and standard installation guarantee covering defects in material and workmanship.

Urethane Polymers International (UPI) warrants its products to be free of defects in workmanship and materials only at the time of shipment from our factory. If any UPI materials prove to contain manufacturing defects that substantially affect their performance UPI will, at its option, replace the material or refund the purchase price.

The dollar value of UPI's liability and buyer's remedy under this limited warranty shall not exceed the purchase price of the UPI materials in question.

URADEK #65-HT-SC (06)

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