

SECTION 07141  
FLUID APPLIED WATERPROOFING

PART 1 GENERAL

1.1 SUMMARY

- A. Fluid applied waterproofing on concrete substrate.

1.2 RELATED SECTIONS

- A. Section 03300 – Cast-In-Place Concrete.

1.3 SUBMITTALS

- A. Product Data: Submit manufacturer's product data, installation instructions and Material Safety Data Sheets (MSDS) for each product indicated.
- B. Samples:
  - 1. Submit 12 inch by 12 inch sample of fully cured waterproofing.
  - 2. Submit maintenance manual.

1.4 QUALITY ASSURANCE

- A. Qualifications:
  - 1. Manufacturer of the roofing system shall have a minimum of 5 years experience in the manufacture of fluid applied waterproofing.
  - 2. The Applicator shall be qualified in writing by the Manufacturer and shall have a minimum of 5 years experience in application of fluid applied waterproofing.

1.5 DELIVERY AND STORAGE

- A. Deliver materials to jobsite in sealed, undamaged containers. Each container shall be identified with material name, date of manufacture and lot number.

1.6 ENVIRONMENTAL CONDITIONS

- A. Install coating materials under the following conditions:
  - 1. Rain is not anticipated within 8 hours of application.
  - 2. Substrate surface temperatures are above 40 deg. F. (5 deg. C.) and lower than 110 deg. F. (44 deg. C.).

1.7 GUARANTEE

- A. Completed installation shall be guaranteed against defects of material and workmanship for a period of 5 years, beginning with date of substantial completion of the waterproofing system

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Fluid Applied Waterproofing: Pacific Polymers, Inc., ELASTO-MAT™ 100, cold applied liquid, fully reinforced, water-cured, monolithic polyurethane elastomeric waterproofing membrane.
  - 1. Horizontal Surfaces: Type I.
  - 2. Vertical Surfaces: Type II.
  - 3. V.O.C.: 0, solvent free.
- B. Mat: Pacific Polymers, Inc., PAC POLY MAT™ 43.
- C. Primer: Pacific Polymers, Inc., ELASTO-POXY™ Primer D&G, ELASTO-POXY™ Primer W.B., or Metal Primer as recommended by manufacturer.
- D. Sealant: Pacific Polymers, Inc., ELASTO-THANE™ 500, a single-component, moisture-cured sealant.

2.2 TECHNICAL DATA

Property	Test Method	Result
Weight per Gallon	---	
Pounds		9.1
Kilograms		4.1
Tackfree Time	---	8 hrs.
at 77°F (25°C) and 55% R.H.		
Hardness (Shore A)	ASTM D2280	30
Tensile Strength ( psi )	ASTM D412	230
(without PAC POLY MAT™ 60)		
Tensile Strength (psi)	ASTM D412	770
(with PAC POLY MAT™ 60)		
Percent Elongation	ASTM D-412	630
(without PAC POLY MAT™ 60)		

Percent Elongation (with PAC POLY MAT™ 60)	ASTM D-412	100
Water Vapor Transmission (grains/hr/ sq.ft)	ASTM E-96 (procedure B water method)	0.0232
Permeance (perms)		0.03436
Average Permeability (perm-inch)		0.0034
Adhesion to Concrete cohesive with ELASTO-POXY™ Primer D&G with Fabric	ASTM D-903	18 lb./in.
Hydrostatic Pressure Resistance	ASTM D-751	135 p.s.i.
Resistance to Decay	ASTM D-154	Passes
Tear Resistance (with PAC POLY MAT™ 60)	ASTM D-624	380 p.s.i.

## 2.3 MIXING INSTRUCTIONS

- A. Add a minimum of 1 pint of cold tap water to a maximum of 1 quart per 5 gallon container of Type I or Type II on the job site immediately prior to application. Use 1 quart when ambient temperatures are lower than 60°F, 1 pint when temperatures exceed 80°F. From 60°F to 80°F, the amount of water may range from 1 pint to 1 quart at the contractor's option.
- B. Work life will decrease with increased amount of water. Add correct amount of water and mix into a 5 gallon container of Type I or Type II using a Jiffy mixer on a drill 300-600 R.P.M. Mix for 2-3 minutes and pour entire contents in an area matching the prescribed coverage rate. Resulting work life varies with temperature and amount of water used. At 77°F, using 1 pint of water, work life is about 30 minutes.
- C. Priming: Use primer at the coverage rate recommended by the manufacturer.
- D. Application: Use notched squeegees for even distribution and controlled thickness.
- E. Coverage rates for Type I:
  1. 30 mils = 52 sq.ft./gallon.
  2. 40 mils = 40 sq.ft./gallon.
  3. 50 mils = 32 sq.ft./gallon.
  4. 60 mils = 26 sq.ft./gallon.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Concrete:
  - 1. Concrete surfaces shall be trowel finished followed by a light brooming, left free of loose particles, ridges, projections, voids and droppings that can interfere with the application of the coatings.
  - 2. Concrete surfaces shall be water cured in lieu of curing compounds for a minimum of 28 days. If curing compounds are used, pre-approve with manufacturer.
  - 3. If concrete is poured in metal pans or decks, they shall be vented to permit proper cure of concrete.
  - 4. If vented pans are not available, then ELASTO-POXY™ D&G PRIMER shall be used. Apply epoxy primer at approximately 250 square feet per gallon, and provide a minimum 1 hour cure time before proceeding. At no time shall materials be applied over concrete surfaces having a greater than 25% moisture content.
- B. Metal: Metal surfaces shall be clean and free of oil, rust or other contaminants that can affect bond of coatings. Metal flashing shall be primed with metal primer.
- C. Substrate conditions and surfaces to be coated shall be subject to examination and acceptance by Manufacturer and Applicator. Commencing of waterproofing work shall constitute acceptance.

### 3.2 PREPARATION

- A. Surfaces shall be clean and free of oil, dirt, grease, and contaminants which can interfere with adhesion of the coatings.
- B. Concrete: Surfaces to receive elastomeric waterproofing system shall be completely cleaned by sandblasting or blastrac .
- C. Flashing: Metal flashing shall be installed at locations where the horizontal deck joins a vertical surface and at deck penetrations. Flashing shall be nailed 2" o.c. and shall be primed with metal primer.
- D. Cracks and Control Joints: Except for non-moving shrinkage cracks, all other cracks and joints shall be sealed with sealant.

### 3.3 APPLICATION

- A. Base Coat: Uniformly apply 40 wet mils of the freshly mixed Type I within 10 minutes from completion of mixing.
- B. Immediately install the mat and use spiked rollers with medium pressure for an even lay of the mat and elimination of air pockets. Allow it to absorb the Type I for 10-15 minutes at 77°F. Absorption will be faster at higher temperatures, and lower at lower temperatures.

- C. Overlap the mat by 6 inches, and make sure to apply an additional 35 wet mils over the 6", plus areas that are to be overlapped, as well as the adjacent areas.
- D. Saturate Coat: After about 1 hour apply another 30 wet mils of freshly mixed Type I over the mat within 10 minutes from completion of mixing. Ensure that no dry fabric is showing.
- E. Coverage shall be made uniformly in order to achieve complete saturation of the mat.
- F. Completed waterproofing system is approximately 75 mils.

END OF SECTION