



PACIFIC POLYMERS ELASTO-MAT 100

COLD APPLIED-FULLY REINFORCED LIQUID APPLIED WATERPROOFING

1. PRODUCT NAME

ELASTO-MAT 100

A one day waterproofing system, fully reinforced, solvent free, water-cured Polyurethane Membrane for Horizontal Applications.

Type I: For horizontal surfaces, Water-Cured, Solvent free. V.O.C.: 0 gr/liter

2. MANUFACTURER

ER SYSTEMS (An ITW Company)
12271 Monarch Street
Garden Grove, CA 92841
800-888-8340
FAX (714) 898-5687

3. PRODUCT DESCRIPTION

Composition: Unique, water cured, fully bonded, fully reinforced, monolithic, polyurethane elastomeric membrane.

Basic Uses: Membrane system for: Between slab, green roof (roof gardens), paver systems

ELASTO-MAT 100 allows expansion and contraction over a broad temperature range and maintains waterproofing properties under continuous (not submerged) exposure to water. **ELASTO-MAT 100** remains flexible from -75°F to $+175^{\circ}\text{F}$ (-59°C to 79°C). **ELASTO-MAT 100** waterproof membrane is intended for use wherever overflow water must be contained.

Shelf Life: 6 months max. at 77°F (25°C) when stored indoors in cool and dry location.

Advantages:

A. COLD APPLIED

- No hot kettles
- No torches, no open flames
- No hot seam welders
- Worker safety
- No fire danger during installation
- Insurability
- No "washout", as with emulsions and acrylic latex during rainy season.
- Variable thicknesses not attainable with standard Peel 'N Stick membranes

ELASTO-MAT 100 does away with the unpredictable cure times and potentially undesirable side reaction with atmospheric moisture and providing a positive controlled cure rate, dense elastomer allowing for extremely thicker applications without gassing and foaming as expected with moisture cured polyurethane systems under similar conditions.

The addition of a specific quantity of water on the job site, blended with the **ELASTO-MAT 100** is what provides this positive cure, in combination with the unique chemistry that eliminates the carbon dioxide from the curing membrane, creating a smooth, dense, waterproof elastomer. Very rapid cure rates are achieved as well. Cured films are tougher, more tack free, and have no cellular structure.

- C. The characteristics of **ELASTO-MAT 100**, as shown above, enable this extremely innovative waterproofing membrane system to be completed in one day to its full specified mil thickness.

The **ELASTO-MAT 100** is liquid applied and fully bonded, which is the great advantage it has over sheet goods, where seams are a problem, as are any kind of punctures, making leak detection and repairs a serious problem.

ELASTO-MAT 100 eliminates the need for most separate crack and perimeter treatments because the system is fully fabric reinforced.

ELASTO-DECK BT KNIFEGRADE is suggested for crack repair, cant strips and penetrations.

The entire **ELASTO-MAT 100** matrix is reinforced with Tie-Tex T325, a stitch bonded fabric noted for its chemical resistance, rot and fungus absence, and superior multi directional strength.

The saturation of the Tie-Tex T325 fabric is the direct benefit of its water cure features, eliminating gassing, foaming, and pinholing, when the membrane is used in thicknesses of 90 dry mils and greater, if desired, in a one day installation.

A porcupine roller is recommended.

The water cured chemistry is ideal for use in hot, dry climates, where atmospheric humidity is almost non-existent.

A time saving, one day system with outstanding elastomeric and waterproofing properties, in any climate.

Standards: A.S.T.M. C836-03; CAN/CGSB-37.58-M86

Sizes: 5 gallon pails

(55 gallon drums available on request)

4. **TECHNICAL DATA**

(See chart on Page 4)

5. **INSTALLATION**

SURFACE CONDITIONS

- A. All surfaces must be clean and free of any oil, dirt, grease and other contaminants which will interfere with adhesion of the coatings. Surfaces shall be left broom clean.
- B. Concrete
- Concrete surfaces shall be trowel finished followed by a light brooming, left free of loose particles, ridges, projections, voids and droppings that would interfere with the application of the coatings.
 - Concrete surfaces shall be water cured in lieu of curing compounds for a minimum of 28 days. If curing compounds are used, site adhesion test may be require.
 - If concrete is poured in metal pans or decks, they shall be vented to permit proper cure of concrete.
 - If vented pans are not available, then **Elasto-Poxy Primer (VOC)** must be used. This two-component epoxy primer is applied at approximately 200-250 square feet per gallon. The primer must have enough time to cure tack-free before proceeding with the complete **ELASTO-MAT 100** System. At no time should any materials be applied over concrete surfaces having greater than 25% moisture content
- C. Plywood
- Only exterior grade tongue and groove plywood, in conformance with U.S. product standard PSI-66 must be used. Plywood shall be at least 5/8" thick. (3/4" minimum preferred.
 - Plywood must be installed with all joints tightly butted and properly blocked to prevent differential deflection between plywood panels. Only ring shank nails must be used 4" o.c., along panel edges and 8" o.c., at intermediate supports.
Note: Plywood decking needs to be coated as soon as possible to avoid plywood delamination.

Plywood substrates need to be primed with **DECKTHANE** Primer prior to applying the **ELASTO-MAT 100**.

D. Metal

- All properly prepared metal surfaces shall be clean and free of any oil, rust or other contaminants that would affect bond of coatings. All metal flashing must be primed with **DECKTHANE** Primer.
- E. All substrate conditions and surfaces to be coated shall be subject to inspection and acceptance by Manufacturer and Applicator. Commencing of waterproofing work shall constitute acceptance.

PREPARATION

- A. All surfaces must be clean and free of any oil, dirt, grease, and other contaminants which will interfere with adhesion of the coatings prior to priming.
- B. Concrete
- All surfaces to receive elastomeric THE **ELASTO-MAT 100** system shall completely cleaned by sand blasting or blastrac.
- C. Plywood
- All seams between plywood sheets and those between metal flashing and the plywood deck must be caulked with **Elasto-Deck BT KNIFEGRADE**. The application of **ELASTO-MAT 100** can subsequently be made immediately over the entire area after priming.
- D. Flashing
- Metal Flashing must be installed at all locations where the horizontal deck joins a vertical surface and at all deck penetrations. Flashing must be nailed 2" o.c. and must be primed with **DECKTHANE** Primer. **ELASTO-MAT 100** is essentially self flashing, due to the fully reinforced assembly and its monolithic nature.
- E. Cracks and Control Joints
- Except for non-moving shrinkage cracks, all other cracks and joints must be sealed with **Elasto-Deck BT KNIFEGRADE** or **ELASTO-THANE 230MP**), a single-component, moisture-cured sealant manufactured by ER SYSTEMS.

III. MIXING INSTRUCTIONS

Add a minimum of 1 pint of cold tap water to a maximum of 1 quart per 5 gallon container of **ELASTO-MAT 100** on the job site immediately prior to application. Use 1 pint when ambient temperatures are lower than 60°F, 1 quart 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 discretion.

Work life will decrease with increased amount of water. Add correct amount of water and mix into a 5 gallon container of **ELASTO-MAT 100** using a Jiffy mixer on a drill 300-600 R.P.M. Mix for 3-5 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.

Priming: Primer is required on all substrates, **DECK-THANE PRIMER** or **Elasto-Poxy Primer (VOC)** may be used at the coverage rates recommended in their data sheets.

IV. APPLICATION

ELASTO-MAT 100 are best applied by notched squeegees for even distribution and controlled thicknesses, particularly important for the base coat, which acts effectively as a leveling coat for concrete.

Coverage rates for Elasto-Mat 100

30 mils = 52 sq.ft./gallon

40 mils = 40 sq.ft./gallon

50 mils = 32 sq.ft./gallon

60 mils = 26 sq.ft./gallon

A. ELASTO-MAT 100 (90 mil) Application

BASE COAT - Uniformly apply 60 wet mils of the freshly mixed ELASTO-MAT 100 within 10 minutes from completion of mixing over the primed substrate.

Immediately install the Tie-Tex T325 fabric and use a spiked roller with medium pressure for an even lay of the mat, and elimination of air pockets. Allow it to absorb the ELASTO-MAT 100 for 10-15 minutes at 77°F. Absorption will be faster at higher temperatures, and lower at lower temperatures.

Note: Overlap the **Tie-Tex T325** fabric 4-6 inches, make sure and apply an additional 25-30 wet mills over the 4-6" area that is to be overlapped, as well as the adjacent areas.

SATURATE COAT – After about 1 hour apply another 30 wet mils of freshly mixed **ELASTO-MAT 100 TYPE I** over the **Tie-Tex T325** fabric within 10 minutes from completion of mixing. Make sure that no dry fabric is showing.

Coverage must be made uniformly in order to achieve complete saturation of the **Tie-tex T325** fabric.

Completed system is approximately 90 mils.

B. ELASTO-MAT 100 (120 mil) Application

BASE COAT - Uniformly apply 60 wet mils of the freshly mixed ELASTO-MAT 100 within 10 minutes from completion of mixing over the primed substrate.

Immediately install the **Tie-Tex T325** fabric and use spiked rollers with medium pressure for an even lay of the mat, and elimination of air pockets. Allow it to absorb the **ELASTO-MAT 100** for 10-15 minutes at 77°F.

Absorption will be faster at higher temperatures and slower at lower temperatures.

Note: Overlap the Tie-Tex T325 fabric 4-6 inches, make sure and apply an additional 25-30 wet mills over the 4-6" area that is to be overlapped, as well as the adjacent areas.

SATURATE COAT – After about 1 hour apply another 60 wet mils of freshly mixed ELASTO-MAT 100 TYPE I over the Tie-Tex T325 fabric within 10 minutes from completion of mixing. Make sure that no dry fabric is showing.

Completed system is approximately 120 mils.

6. AVAILABILITY AND COST

ELASTO-MAT 100 is supplied through building material dealers.

7. PRODUCT WARRANTY

All products proven to be defective in manufacture will be replaced at no charge. Since the use of these products is beyond our control we cannot assume any risk or liability for results obtained, nor can we accept damages in excess of the purchase price of these products.

8. MAINTENANCE

If **ELASTO-MAT 100** is damaged, it can be repaired by cleaning the surface, priming with **DECKTHANE** primer and recoating it with **ELASTO-MAT 100**

9. TECHNICAL SERVICES

All of the latest updates to product data

Technical assistance can be obtained by contacting:

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4. TECHNICAL DATA – ELASTO-MAT 100

Property	Test Method	Result
Weight per Gallon	---	9 +/- 0.2 lb (4.08 +/- 0.1)
Tackfree Time (@ 77°F (25°C) and 55% R.H.) ---		8 hrs.
Hardness (Shore A)	ASTM D2280	30A
Tensile Strength (psi) (without fabric)	ASTM D412	230
Percent Elongation (without fabric)	ASTM D-412	630
Tensile Strength (psi) (with fabric)	ASTM D412	770
Percent Elongation (with fabric)	ASTM D-412	100
Water Vapor Transmission (grains/hr/ sq.ft) (procedure B water method)	ASTM E-96	0.0972
Permeance (perms)		0.252
Average Permeability (perm-inch)		0.03
Adhesion to Concrete with Elasto-Poxy Primer with Fabric	ASTM D-903	18 lb./in. cohesive
Hydrostatic Pressure Resistance	ASTM D-751	135 p.s.i.
Resistance to Decay	ASTM D-154	Passes
Tear Resistance (with Mat)	ASTM D-624	380 lb/in
Dimensional Stability (4-days water immersion @50°C)	CAN/CGSB-37.58-M86	2.9% (volume change)
Water Absorption (4-days water immersion @50°C)	CAN/CGSB-37.58-M86	2.6% (mass change)
Adhesion-in-Peel after water Immersion (24 hrs @ 50°C)	CAN/CGSB-37.58-M86	no peel or separation from concrete exceeds 175N/m
Crack Bridging (-26°C to 40°C) (10 cycles)	CAN/CGSB-37.58-M86	no evidence of cracking or splitting no loss of adhesion
Low Temperature Flexibility (4 hours @ -20°C)	CAN/CGSB-37.58-M86	no cracking
Recovery	CAN/CGSB-37.58-M86	93.5%
Water Tightness (24 hrs @ 73°F)	CAN/CGSB-37.58-M86	no evidence of leakage