POLY-TRON ELASTOMERIC CONCRETE

PRODUCT DESCRIPTION

Poly-Tron is a fast-setting, low-viscosity, waterproof, moisture-insensitive, 100% solids, modified polyurethane elastomeric concrete material. It consists of three components which include a resin (Part A), hardener (Part B) and aggregate (Part C).

USES

Poly-Tron elastomeric concrete has the following primary uses:

- An expansion joint edge material
  - Bridges with and without overlays
  - Replacing the blockout area when removing failed molded rubber joints or metallic armored joints
- A flexible nosing material for metallic expansion joint assemblies
- A patching compound for spalls in concrete deck surfaces

Poly-Tron reduces the need for expensive and cumbersome steel angles, even on high volume - high speed interstate highway bridges and is ideal for new construction and rehabilitation projects. Since many joint seals are incompatible with asphalt, Poly-Tron is an ideal application for overlayed bridges.

FEATURES

- Superior adhesion to various substrates
- Excellent resistance to U.V., freeze-thaw, thermal shock, impact, solvents, chemicals and moisture
- Flexible and resilient
- Easy to mix, install, and fast setting
- High quality and economical

LIMITATIONS

Minimum ambient temperature during installation is 45ºF (7ºC) and rising.

PACKAGING

Available in 900 in^3 pails (14,748 cm^3), 9,000 in^3 buckets (147,484 cm^3), 90,000 in^3 drums (1,474,836 cm^3) and 450,000 in^3 totes (7,374,179 cm^3).

INSTALLATION

Suggested Installation Tools and Materials

Duct tape, ½" heavy-duty low-speed drill with mixing paddle, empty mixing pails, flat head screwdriver, utility knife, power cords, 3-way power cord, plastic and/or roofing felt, margin trowels, protective gloves, rags, knee pads, clean-up solvent. Note: Keep solvents away from in-place, uncured resins.

Create and Prepare Blockout

Prepare blockout area per plans and specifications. New concrete should be a minimum of 85% cured (10-14 days for 28 day concrete) prior to application. Substrate must be clean, dry to the touch (<5% moisture), sound, and free of incompatible substrates such as unapproved patching materials, delaminated concrete, salt, oil, or chemical saturation, corroded steel, asphalt, bitumen, etc. If the substrate is questionable, the on-site tech representative and/or manufacturer should be notified for recommendations prior to placement. The bottom interface of the Poly-Tron must be placed on a structural member. Sandblast all surfaces against which the Poly-Tron is to be placed. Metalized steel may require only a "brush blast" to ensure a clean surface. All non-metalized steel should be sandblasted to a near-white finish with a good surface profile (SSPC-10). Remove all sand and debris with oil-free compressed air. Be sure the temporary form for the joint opening is set per plans and specifications and ensure a tight fit to prevent elastomeric concrete from leaking into the joint opening. Do not use any form release agents.

Primer Application

Prepare the Poly-Tron primer by mixing the A and B components in a clean bucket for 60-90 seconds. Apply with protective gloved hand or brush. The coated area need only be thick enough to cover the area with a thin layer. Avoid puddling of primer. Prime all surfaces that are to be in contact with the Poly-Tron elastomeric concrete. Primer yield is 80 ft^2 per gallon at 20 mils thickness.

Elastomeric Concrete Installation

Place mixed Poly-Tron immediately after priming, no waiting time is needed. Mix Poly-Tron according to proper ratio (2:1, A:B, by volume). Mix parts A & B first (approximately 30-60 seconds) with a low speed drill (300-500 rpms), then add the supplied aggregate and mix thoroughly (90 seconds). All aggregate should be saturated with the resin mixture. Place the mixed elastomeric concrete into the prepared area per plans and specifications. Make sure that it is thoroughly compacted under any steel angles, around the anchors and within the block out. Trowel flush. Working time of mixed material is approximately 10-25 minutes per kit from beginning of mixing, depending on the temperature. After cure, remove temporary forms and grind a ¼" bevel to the two opposing top joint nosing edges.

Traffic Ready Time

The Poly-Tron cure time is temperature and mass dependent; the warmer the product, the faster the cure time, while the opposite is also true. The following traffic ready times may be used as a guide for the unheated system at the listed ambient air temperatures. If a faster cure is required, or if the temperature is colder than 45ºF, please contact R.J. Watson for site specific recommendations.

- 95º - 80ºF : 1 – 2 ½ hours
- 80º - 65ºF : 2 – 3 ½ hours
- 65º - 45ºF : 3 – 5 ½ hours

Any deviations from any of the installation instructions require manufacturer's approval and recommendations.

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PRECAUTIONS

All materials should be stored indoors on a hard and dry surface between 65ºF and 100ºF and be kept away from moisture prior to installation. Bags of aggregate that have become wet at any time should not be used. Keep unmixed, uncured product from freezing. Refer to Material Safety Data Sheet for detailed health and safety information prior to use. Part A and B have a one year shelf life from the date of manufacture in unopened containers.

WARRANTY

R.J. Watson, Inc. warrants that its products are manufactured free of defects and conform to the technical data listed. Under this warranty we will replace, at no charge, any material proven defective when applied in accordance with our written instructions for applications recommended by us as suitable for this product. R.J. Watson, Inc. shall not be liable for any injury, loss or damage, direct or consequential, arising out of the use of this product.

PHYSICAL DATA

(typical properties, not intended for specification)

Property	Test Method	Value
Binder Only		
Percent Elongation	ASTM D638	175% min.
Tensile Strength	ASTM D638	1,300 psi min.
Tear Strength	ASTM D624	110 pli min.
Shore D Hardness	ASTM D2240	45 ± 5
Binder + Aggregate		
Compressive Strength	ASTM C579 (Test Method B)	3,500 psi
Brittleness / Impact Resistance	Ball Drop[1]	7 ft-lb min.
Standard Color	Visual	Black

1. The ball drop test consists of casting a 2.5" diameter disk at 0.375" thick. Specimens are conditioned for four hours at test temperatures. A 1 pound steel ball is dropped onto the center of the specimen through a plastic guiding tube from an initial height of five feet. The drop height is increased by one-half foot intervals until specimen cracks. Average of 4 specimens.

INSTALLATION PHOTOS

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