BOSCOSEAL PU-X

Polyurethane-Based Liquid Applied Waterproofing Membrane

Technical Data Sheet

Description

Bostik Boscoseal PU-X is a single component, ready to use, highly elastic, cold applied polyurethane waterproofing which cures into a membrane with excellent abrasion, mechanical, chemical, thermal, and UV resistance.

Areas of Application

- For roof waterproofing solutions in both new construction and refurbishment projects (exposed or concealed).
- Green roofing for energy efficiency.
- Flower beds and planter boxes
- Parking areas and vehicular traffic system. -
- Bridge decks, balconies, bleachers and terraces
- Wet areas such as toilets, bathrooms, kitchens as an under tiling membrane.

Product Features

- Easy and fast application
- Provides a seamless waterproofing membrane
- Highly resistant to abrasion, water and root penetration.
- Mechanical properties unaffected by UV and other weather conditions. (Consult Bostik for optimum results)
- Water vapor permeable.
- Very good abrasion resistance and suitable for walkways and vehicular traffic areas. (Consult Bostik for optimum results)
- Crack bridging capability up to 2mm
- Provides excellent thermal resistance over a temperature span of -30°C to +90°C
- Resistant to salty water, aqueous solution, bases, diluted acids, aliphatic solvents, benzene and mineral oils.
- Impregnates by penetrating deeply into all mineral and concrete surfaces with high adherence
- Fills the non-structural capillary cracks by decreasing water absorbency of the concrete construction.
- Hardens the upper surface of the concrete by deeply penetrating into the surfaces.
- Suitable onto the old bituminous membranes and *asphalt felts (e.g. APP and SBS)*, PVC, EPDM membranes using special type of primer (Consult Bostik Technical Dept.).

Physical &Technical Data*

PROPERTY	RESULTS	TEST METHOD
Form	Liquid Polyurethane	
Colour	Grey, White	
Density	1.40 kg/L	
Viscosity	7,000-14,000 cps	ASTM D 2393
Solid Content	83% by weight; 80% by volume	ASTM D 1259
Tensile Strength	>4 MPa	ASTM D 412 / DIN 52455
Elongation at Break	>800%	ASTM D 412 / DIN 52455
Water Vapor Permeability	>25 g/ m²/ day	ISO 9932:91
Crack Bridging Capability	Up to 2 mm crack	EOTA TR-008
Shore A Hardness	65	ASTM D 2240
Root Resistance	Resistant	UNE 53420
Adhesion (Pull-Off) Strength	> 2MPa	ASTM D 4541
Service Temperature	-30°C to +90°C	In-house Lab
Application Temperature	Between +10°C to +35°C	In-house Lab

*Technical Data are approximate values only provided according to a temperature of +20°C and relative humidity of 50%

Substrate Preparation

The concrete substrate must be sound and of sufficient compressive strength (minimum 25 N/mm²) with a minimum pull strength of 1.5 N/mm². Substrate moisture should not exceed 5% (use moisture meter or polyethylene test in accordance of ASTM D 4263). New concrete structures need to dry for at least 28 days.

The substrate must be clean and free from all traces of loose materials, old coatings, curing compounds, release agents, laitance, oil grease etc. It should be saturated surface dry (SSD) condition.

Structurally unsound layers or surface contaminants must be mechanically removed by abrasive blast tracking, shot blasting, scarifying, or grinding. Substrates heavily impregnated with oil must be cleaned by torching, using suitable solvent or degreaser substance.

Weak concrete must be removed and surface defects such as blow holes and voids must be fully exposed.

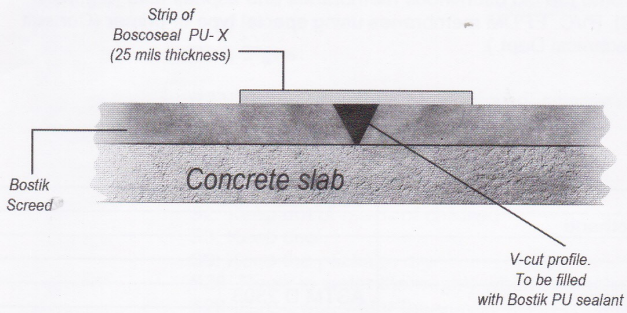
All ducts, loose and friable material must be completely removed from all surfaces before application of product; preferably by brush and/or vacuum.

For New Construction: (exposed-type roofdeck application)

1. For a well prepared and mechanically sound concrete slab, apply Bostik Screed to attain desired slope-to-drain surface level. Follow the instruction stated in TDS for Bostik Screed. . For areas with a thickness below ½ inch, apply Bostik Emulsion 57 as adhesion enhancer (see the separate TDS for more information).

2. Anticipate cold joints during Bostik Screed pouring. With these joints, create a V-cut profile using concrete grinder or router with the size of approximately 2 inches on both edge diagonally, as shown in drawing below:

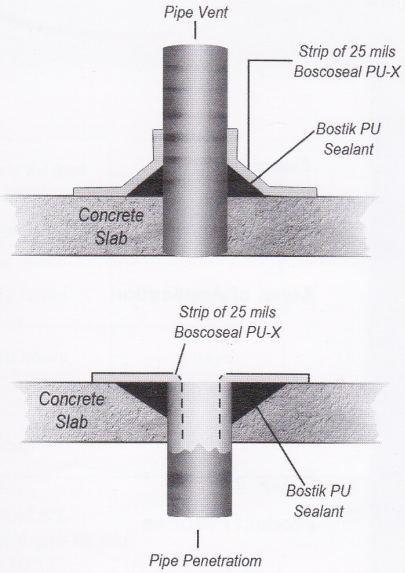
3. Apply Bostik PU sealant to fill completely the V-cut profile, about 1.5 inches in depth. Once the sealant is cured, create a strip of 25 wet mils Boscoseal PU-X, 3 inches on each side.



For existing and retrofitting works:

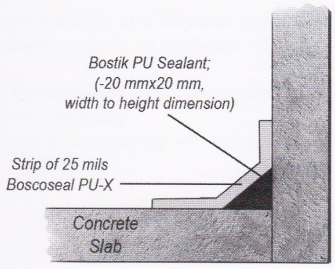
1. Wherever necessary, apply Bostik screed to attain desired slope-to-drain floor level and avoid possible water ponding.
2. If there is dynamic crack beyond 1/16 inch, create V-cut shape profile using concrete grinder or router with the size of approximate 2 inches on both edge diagonally.
3. Apply Bostik PU Sealant , allow the sealant to cure and apply strip 25 wet mils Boscoseal PU-X, 3 inches of each side

For pipe vent or penetration:



1. Seal the gap between pipe and slab using Bostik PU Sealant for about 2 inches in diameter.
2. Apply a strip of 25 wet mils Boscoseal PU-X, 3 inches each side of the sealant around the pipe.

For flashing and wall application:



1. Apply Bostik PU sealant as shown above with approximate 20mm width and 20mm height in all corners where the floor meets the wall.

2. After the sealant has cured, create a strip of 25 wet mils Boscoseal PU-X measuring 3 inches on each side.

Priming

For porous substrates like concrete, cement mortar, or wood, use BoscosealPur PurPrimer 1C, then apply Boscoseal PU-X within 2-3 hours (not later than 4 hours) when the primer is still a little bit tacky.

For non-porous substrates like metals, ceramic tiles, use BoscoPur EpoPrimer 2C, then apply Boscoseal PU-X within 6- 12 hours (not later than 24 hours) when the primer is still a little bit tacky.

Mixing

Stir the material well by means of an electric stirrer (approx. 500 rpm). Mixing time at least 2-3 minutes until homogenous mixture is achieved.

NOTE: Bostik BoscoPur Fabric can be used as reinforcement for wall-floor connections, pipe penetration, flashing etc. For this application, apply the 1st coat Boscoseal PU-X and then embed the BoscoPur Fabric and immediately apply 2nd coat of Boscoseal PU-X as on wet on wet.

Application

1. After application of appropriate primer and observing its curing time, using brush or roller consistently cover the whole area with Boscoseal PU-X following coating system table shown below.

2. 2nd coat has to be applied within 18 hours (not later than 48 hours), if necessary.
As an option, it can be applied by an airless spray with pump requirement as:

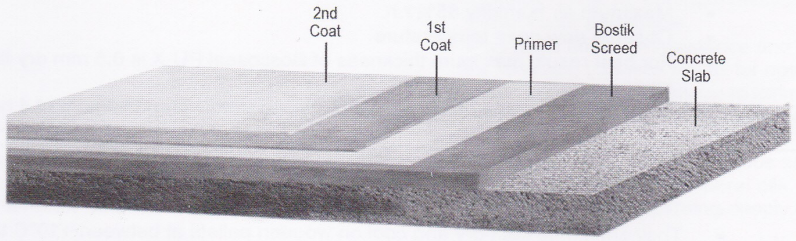
~minimum pressure: 220 bar
~minimum output: 5.1 L/min
~minimum nozzle diameter: 0.83 mm (0.033 in)

3. Ensure that Boscoseal PU-X coating layers overlap by at least 3 inches beyond all previously applied detailing strips.

Coating Systems

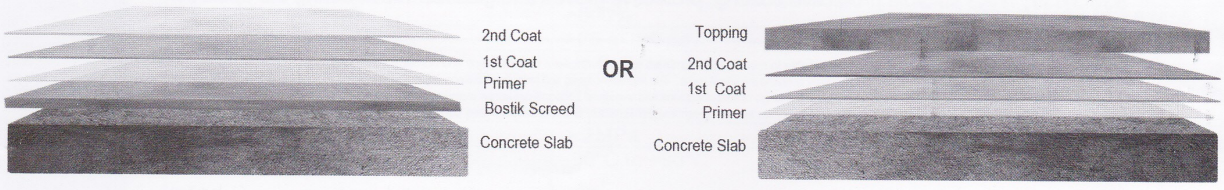
1. Maintenance or Occasional Pedestrian Traffic System

	Product	Consumption	Thickness per Coat	Yield per 25 kg (17.9 L)
1st Coat	Boscoseal PU-X	0.4 L / m²	20 wet mils (16 dry mils	45 m²
2nd Coat	Boscoseal PU-X	0.4 L / m²	20 wet mils (16 dry mils)	45 m²



2. Low to Medium Pedestrian Traffic *(or for Concealed/Buried System)*

	Product	Consumption	Thickness per Coat	Yield per 25 kg (17.9 L)
1st Coat	Boscoseal PU-X	0.5 L / m²	25 wet mils (20 dry mils)	36 m²
2nd Coat	Boscoseal PU-X	0.5 L / m²	25 wet mils (20 dry mils)	36 m²



Important Notes:

- **Discoloration might occur due to exposure to UV radiation but will not affect its mechanical properties and color uniformity.**
- **For aesthetic/decorative, excellent abrasion resistance, and UV stability requirement, apply Bostik BoscoPur Top-LT top coat (See TDS for more details) for optimum results.**

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Curing Details

Temperature	Rain Resistant after	Ready for foot traffic	Full cure
+10°C	~ 12 hours	~24 hours	~ 8 days
+20°C	~ 5 hours	~12 hours	~7 days
+30°C	~ 4 hours	~10 hours	~ 6 days

Packaging 25 kg (17.9 L) and 6 kg (4.3 L) metal can

Limits

- Substrate moisture should be at most 5%
- Concrete slab must be minimum of 4 weeks old
- Minimum substrate temperature + 10°C
- Maximum substrate temperature + 30°C
- Maximum air humidity 85% r.h.
- Observe dew point temperature.
- For best result, maximum thickness of Boscoseal PU-X is 0.5 mm dry film thickness per layer
- Newly applied surfaces should be protected from water minimum of 4 hours.

Storage

- They should be protected for water, direct sunlight and adverse weather condition
- They should be kept dry and cool on wooden pallets at between +10°C to 25°C in moisture free conditions.
- The opened products should be closed immediately and consumed first.
- Maximum 3 buckets should be stocked on each day.
- Shelf life is maximum 9 months conditional to complying with abovementioned storage conditions.

Risk Signs:

R23/24/25: Poisonous when inhaled, swallowed and contacted with skin.

Security Signs:

S2: Keep out of reach of children
S3: Keep cool
S9: Keep the package dry
S26: Rinse in water thoroughly when contacted with eyes and consult a doctor
S28: Rinse with water thoroughly when contacted with skin and consult doctor
S29: Do not throw in the drain
S36/37/39: Wear suitable protective coating, protective gloves and glasses/ mask during the operation

Disclaimer : The information detailed in this data sheet is liable to modification from time to time in the light of experience and normal product application, and therefore customers are advised to check with Bostik Philippines, Inc., quoting the reference number that they possess the latest issue. The representations and recommendations regarding the products are based on tests which we believe to be reliable. However, no guarantee on their accuracy can be made because of the great range of field conditions and variations encountered in raw materials, manufacturing equipment and methods. Thus, the products are sold with limited warranty only, and on the condition that purchasers will make their own tests to determine the suitability of the product for their particular purposes. Under no cirmcumstances will Bostik Philippines, Inc. be liable to anyone except for replacement of the products

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