

TECHSEAL PU2

TWO PART POLYURETHANE JOINT SEALANT

TECHSEAL PU2 is a high performance two component polyurethane sealant. When cured, it forms a tough, flexible seal and bond capable of cyclic, expansion and compression movement. Joints or fabrications formed with this sealant can be expected to extend and compress a total of ($\pm 30\%$) of original joint dimensions. Techseal PU 2 is virtually unaffected by normal weathering conditions such as rain, sunlight, snow, sleet, ultra-violet radiation, ozone, atmospheric contamination and pollution. Its excellent weatherability enables it to retain its original properties after years of exposure. Its physical properties remain relatively unchanged over a wide temperature range (-20°C to 70°C).



Technical Characteristic

Typical properties after seven days cure at 25°C and 50% RH

Sr. No.	Properties	Value
1.	Appearance	Flowable viscous paste
2.	Type of cure	Forced chemical cure
3.	Type	2 Component
4.	Pot Life	1-2 Hrs.
5.	Initial surface dry time in min.	40-50 min.
6.	Mixing ratio by wt.	85:15
7.	Shore A hardness	20-30 approx.
8.	Tensile strength	7-10 kg/cm ²
9.	Elongation at break	>500%
10.	Chemical resistance	Resistance to dil. acids, alkalis, oils, fuels etc.
11.	Application Temperature	10°C to 55°C
12.	Service Temperature	-20°C to $+70^{\circ}\text{C}$

Features / Advantages

- Fast curing & setting
- Excellent adhesion & bonding strength
- Excellent adhesion to most materials including metals, concrete, brick, wood
- Paintable
- Resistant to fungal attack. Also suitable for potable water
- Excellent water and chemical resistance
- High movement accommodation ($\pm 30\%$)

Recommended Uses

- For sealing floor joints
- Granite, sandstone and marble pointing GRC, Fiberglass & Specialty panel systems.
- Metal curtain wall facades
- Potable water tanks
- Sealing gaps and adhering facade and cladding panels to various building materials
- Sealing construction and expansion joints
- For sealing of concrete joints in airport runways

Surface Preparation

1. Surface preparation is the most important step before the application of sealant to get best results and to avoid failure.
2. The joint surface must be dry, free from dust, coating, bituminous mastics, concrete curing agents, mold release agents, oils, greases and loose particles.
3. Clean the joint surface by wire brush and sanding with emery paper.
4. Remove dust by compressed air or paint brush.
5. Wipe out oil and grease by solvent soaked cloth (such as xylene, toluene or acetone.)

BACK UP MATERIAL



Insert compressible polyethylene, polyurethane, neoprene, polyethylene butyl rod as backup material to control depth of sealant in the joint and to provide support for tooling of the sealant.

PRIMING



Select a primer suitable to the substrate and apply two coats by brush on the sides of the joints surface at an interval of 30 minutes

- Primer RDL 942: For porous substrate such as concrete, wood etc
- Primer RDL 947: For non-porous substrate such as metals, glass etc.

BOND BREAKER



Fix bond breaker tape such as self-adhesive polyethylene tape on back-up material to avoid adhesion of sealant to the third surface.

MASKING TAPE



Apply masking tape such as self-adhesive polyethylene, cellophane or cloth tape on both edges of the joint. It is used to improve the neatness of the finished seal by protecting the face edges of the joint. It may be removed immediately after tooling of the sealant.

MIXING



The base and accelerator compounds are packed in pre-weighed quantity as per the mixing ratio. After the application of primer, mix the material of individual container. Transfer entire quantity of accelerator to the base compound tin and mix it thoroughly to a uniform, homogenous black color. Mixing can be done manually with spatula, palette knife or special flat stirrer attached to a low speed electric mixer less than 500 r.p.m.

APPLICATION



Pouring Grade (Manual Application) After mixing the two components, the mix is suitable for pouring directly from the container into the joints. This grade level itself to form a smooth and clean surface. It can also be applied with the help of an automatic sealant application machine.

TOOLING AND FINISHING



It is desirable that a smooth surface is obtained. Tool the sealant by pressing the puffy knife or flat tool against the sealant surface, moving along the length of the joint. Tooling breaks air bubbles and exposes any air pockets present. Tooling compresses the sealant, thus promoting adhesion to the joint sides. After tooling the masking tape should be removed immediately. Soap solution can be used to smoothen the sealant surface.

Coverage

- **Sealant:** To estimate the no. of running met work can be done by TECHSEAL PU2. Can be very easily estimated by using the following formula:-

$$i) L = \frac{660}{(W \times D)}$$

Where, L = Length of the joint in linear running meter

W= Width of the joint in mm.

D = Depth of the joint in mm

- **Primer:** 1 lit. of primer is required per 15 kgs of sealant.

Cleaning of Tools and Equipment

- Tools and equipment can be easily cleaned with solvent such as xylene, toluene, methyl, ethyl, ketone and acetone

Storage and Shelf Life

- Store the material at cool and dry place (at 25°C temp. & 50% RH)
- Shelf life is 9 months in unopened containers

Packing

- Techseal PU 2: Base & Hardener is available in 4 Kg Pack and Primer: 1 ltr.

Specification Complies

- BS 5212 & BS 4254
- EN 14187: 2003
- ASTM C 920
- PPM 400 Hardness Test

Precautions

- Some people are sensitive to resins, hardeners, solvent and its vapors so it is advisable to use hand gloves and goggles
- Avoid application below 10°C temperatures
- Avoid application and damp or moist substrate
- Storage – store at cool & dry place
- Ensure that two coats of primer are applied on the jointing surfaces V.

Warranty

10 Years Product Performance Warranty.

*Conditions Apply

1. Movement of Structures / Concrete Slabs resulting in undue stresses beyond manufacturer's specification for elongation / compression on the products caused by settlement, error in design calculations, construction issues or any other reason results to structural failure.
2. Disintegration of the substrates.
3. Willful or accidental mechanical damage caused by acts of war, vandalism, tools or individuals etc.
4. Changes in the appearance of the Sealant caused by atmospheric contaminants or other factors like tyers/ rubber marks etc.
5. Natural causes such as earthquake, lightning, fire, adverse weather conditions including but not limited to very high temperatures accompanied by high humidity over a considerable period of time etc.
6. The products warranted being free of defective workmanship and / or materials.
7. Applications should be done as per given in technical data sheet.
8. The joints should be filled as per instructed in the technical data sheet.

Disclaimer

The product information & application details given by the company & its channel partners are provided in good faith & are mentioned as a general guideline during usage. Users are advised to carry out tests & take trials to ensure the suitability of products meeting their requirement prior to full scale usage of our products. Since the correct identification of the problems, quality of other materials used and the on-site workmanship are factors beyond our control, there are no expressed or implied guarantee / warranty as to the results obtained. The company does not assume any liability or consequential damage for unsatisfactory results, arising from the use of our products.