Polyseal 51

Tar free PU elastomeric PU sealant (high modulas)

Description

Polyseal 51 is a high modulas, tar free, 2C polyurethane elastomeric sealant formulated to accommodate continual cyclic movements throughout high and low temperature conditions. Polyseal 51 does not contain any tar or bitumen. Polyseal 51 is a two component sealant for internal and external joint sealing which is resistant to jet fuel, oil, hydraulic fluid and skydroll and remains stable at constant exposure to high temperature and high humidity climates. Polyseal 51 is thermally stable and withstands road trafficking under diverse climatic conditions. The resiliency of Polyseal 51 makes it suitable for thermal expansion and contraction of the concrete substrates.

Uses

For sealing of movement joints in bridge decks, airport runways, docks, sewage water tanks and reservoirs.

Key features

- High performance in extreme conditions
- High modulas and high movement accommodation of ±30%
- Fuel, oil, hydraulic fluid and skydroll resistant
- Excellent weather resistance
- Do not contain tar or bitumen
- Available in grey and off white shades
- Complies BS 5212, BS 4254 & EN 141875 specifications

Properties

Type	:	Cold applied, two component, polyurethane sealant
Mixing ratio (R:H)	:	1 : 1 by weight
Recommended primer	:	Duraprime 100
Colour	:	Grey
Solids content by weight ASTM D 2369	:	≥ 95
Density	:	1.20 g / cc
Pot life @ 27^{0}C ASTM D 2471	:	≥ 30 min
Curing time ASTM D 1640		
Tack free dry	:	8 hrs
Full cure	:	48 hrs
Light traffic	:	72 hrs
Shelf life		
Resin	:	6 months
Hardener	:	6 months in unopened container

Performance data

Elongation ASTM D 638	:	≥ 400%
Movement accomodation factor (MAF) ASTM C 719	:	± 30%
Hardness, Shore A ASTM D 2240	:	≥ 30

Directions to use

Joint preparation :

Joint size : 5mm width (min) & 50 mm width (max)

Width depth ration :

- For butt joints - 2 : 1
- For lap / floor joints - 1 : 1

The best temperature range to carry out the sealing job is between 5 and 300C. The joint sealing slots should be accurately formed. The concrete must be sound and dry. The sealing slot surfaces must be well prepared to remove dust and laitance by grit blasting or grinding. The slot should be blown out with dry compressed air prior to priming. Care should be taken to ensure that the slot is formed to the required depth with proper back up materials, maintaining the standard ratio of W:2D. Back-up material is used to control the geometry of the seal throughout the length of the joint and to act as a base on which the sealant could be applied. Compressive materials like expanded polyethylene, expanded polystyrene, PU foams or cork boards are employed as back-up materials.

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Film tapes or rods of hard density polyethylene foam are used as bond breakers which break the bond between the sealant and back up material in order to prevent a three faced adhesion which would cause distortion to the joint, thus causing joint failure

Priming

Duraprime 100 should be applied on the joint sides using a clean brush, ensuring proper wetting of the joint surfaces. Sealant application

Polyseal 51 is applied just after the primer becomes tack free but before it has fully cured. The sealant should be applied between 1 and 4 hours after priming.

If the primer is left to dry for longer than 4 hours, the surfaces must be re-primed prior to applying the sealant. If the primed joint is left for more than 24 hours before the sealant can be applied, the sealing slot should be re-grit blasted and the priming procedure is repeated.

Drain the total contents of resin and hardener into the mixing pot. Mix thoroughly for 5 minutes using a slow speed stirrer. Mixing ratio of resin and hardener is 1 : 1 by weight. Apply by gun / stainless steel spatula. Allow to cure for 24 hours.

Tooling of the sealant

The applied sealant should be tooled immediately to a smooth finish before it begins to set. It is achieved by drawing over its surface a flat stainless steel spatula wetted with surface lubricant like kerosene. By this, the sealant is compressed with a result that air bubbles are broken up and the cured sealant becomes free of voids and there is proper adhesion of the sealant to the sides of joints. Masking tape, if used, should be removed immediately.

Equipment cleaning

Clean tools and brushes with PUT 502

Packaging

Polyseal 51 is available in 5 kg packs and has a maximum shelf life of 6 months for resin and 6 months for hardener in the un-opened containers.

Storage and handling

The product should be stored in accordance with national regulations. It should be kept in a cool, well ventilated area, away from heat, direct sunlight, sparks and children. Handle with care. Mix resin and hardener as per the ratio .Use the mix solution within the pot life time.

Health and safety precautions

Please refer to MSDS. Observe reasonable care and employ ordinary hygienic principles such as washing the hands with soap and water before eating or smoking. It is recommended to wear gloves, goggles and nose masks while application. Incase of splashes on the skin, dampen the cloth with thinner PUT 503 and wipe the hands with the cloth. Wash then with soap and water. Dried film is non toxic. Incase of contact with eyes, rinse with plenty of water and seek medical advice. Incase of continuous exposure to vapours, the applicator should be immediately moved to get fresh air. The disposal of excess or waste material should be carried out in accordance with the local legislations.

Disclaimer

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SPECIALIZED FLOOR COATINGS

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