

TECHSEAL COAL TAR SEALANT

DESCRIPTION

TECHSEAL CTPS (BS-5212) are two component sealant based on THIOKOL – Polysulphide liquid elastomer. It consists of a 'base' compound and accelerator (curing agent). When two components are mixed together prior to application, a chemical reaction is initiated which cures instant to a firm, flexible rubber like seal with excellent adhesion to concrete, masonry, wood, glass, acrylic and PVC plastics. It is capable of withstanding repeated extension, compression & cyclic movements without the loss of adhesion and resists deterioration by weathering, sunlight, ozone, water, salt, oils and fuels. It is far superior to all the conventional joint sealant material like bitumen, mastics, metallic channels and expansion sheets. Techseal CTPS is a pouring grade material used for sealing of horizontal joints.

FEATURES / ADVANTAGES

- Cures at ambient temperatures to a tough, elastic and flexible rubber like material.
- Bonds strongly to most of the building material with the use of recommended primer.
- Durable, remains unaffected by UV rays, ozone and weathering conditions.
- Resists water, salt water, 10% dil. acids except nitric acids, alkalis, most of the common chemicals, vegetable, lubricants, oils and fuels.
- It performs well in a temperature range from -40°C to 80°C intermittent.
- Slip resistant (sag) can be applied in horizontal joints.
- Movement capability – Provides satisfactory hermetic sealing of the joint subjected to expansion, contraction, vibration and cyclic movement within the following limits.
- Movement joints up to $\pm 25\%$ of the width.
- Resilient recovers the original width after expansion & contraction without losing the surface bond.
- Excellent reparability property.
- It can be over coated by waterproofing compounds.
- Non toxic.
- Sealants will not cause staining to concrete masonry or stones.
- Excellent Fuel Resistance.
- Fire Resistance.

TYPICAL APPLICATION

- Sealing of expansion, contraction & construction joints in structures such as,
 - Concrete pavement, highways, runways, airfields, and petrol pumps.
 - Areas, which are affected by fuel, oil, fire etc.
 - Extreme temperature regions.
- Sealing of water retaining structure joints such as,

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- Water tank, reservoir, aqua ducts, canals, culverts

TYPICAL APPLICATION

- Nature : Two Component
- Mixing Ratio : 92 : 8
- Consistency after mixing : Flowable paste
- Application time (pot life) at 30⁰ C : 1 - 2 hours
- Initial setting time at 30⁰ C : 24 hours
- Complete curing time, At 5⁰ C : 8 weeks
- At 15⁰ C : 4 weeks
- At 25⁰ C : 2 weeks
- At 30⁰ C : 1 week
- Color-Base compound : Black
- Accelerator (curing compound) : Dark brown to black
- Mix compound : Black
- Slump (sag) resistance : Sagging

MECHANICAL PROPERTIES

- Tensile strength : min 3.0 kg/cm²
- Peel strength (concrete) : min 2.0 kg/cm
- Hardness SHORE A : 10-15
- % Elongation : 300% minimum
- Abrasion resistance : Excellent
- Chemical and solvent resistance : Excellent
- Flame resistance : Excellent

DIRECTIONS FOR USE

SURFACE PREPARATION

1. Surface preparation is the most important step before the application of the sealant to get the best results and to avoid failure.
2. The Joint surface must be dry, free from dust, coating, bituminous mastics, concrete curing agents, mould 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.)

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BACK UP MATERIAL

Insert compressible polyethylene, polyurethane, neoprene, polyethylene butyl rod as back-up 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 supplied 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

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.

TOOLING AND FINISHING

It is desirable that a smooth surface is obtained. Tool the sealant by pressing the puffy knife or a flat tool against the sealant surface, by moving along the length of the joint. Tooling breaks

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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 quantity of TECHSEAL required to seal the joint can be very easily estimated by using the following formula:-

$$1) \quad L = 625 / (W \times D)$$

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 15kgs of sealant.

CLEANING OF TOOLS & 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 : 4 kgs, 6.5 kg

Primer : 100 ml, 500 ml, 1 liter.

SPECIFICATION COMPLIES

BS 5212 (1990) : British Standard Specification

PRECAUTIONS

- Some people are sensitive to resins, hardeners, solvent and its vapours 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.