

Mahaseal[®] PS 740

Gun Grade Polysulphide Sealant

Description

Mahaseal PS 740 is two component gun grade sealant based on 'THIOKOL' – Polysulphide liquid elastomer. It consists of a 'base' compound and 'accelerator' (Curing Agent). When the two components are mixed together prior to application, a chemical reaction is initiated which cures instantly 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 sealing material like bitumen, mastics, metallic channels and expansion sheets.

Features / Advantages

- Cures at ambient temperatures to a tough, elastic and flexible rubber like material
- Bonds strongly to most of the building materials with the use of recommended primers
- Durable, remains unaffected by UV rays, ozone and weathering conditions
- Resistant to water, salt water, 10% dil. acids except nitric acids, alkalis, most of the common chemicals, vegetable, lubricating oils and fuels
- Performs well in a temperature ranging from -20°C to 80°C
- 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 ± 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
- Sealant will not cause staining to concrete masonry or stones

Typical Application

- Sealing of expansion, contraction & construction joints in building structures such as, basements, subways, retaining walls, floors, external walls and claddings of high-rise buildings, roof terraces & ceilings especially structural expansion joints running through the ceiling
- Sealing of dynamic structural cracks
- Glazing joints of window, door frame and curtain walls
- Joints & 'J' bolts of asbestos sheet roofing
- Sealing of water retaining structure joints such as, water tank, reservoir, dams, aqua ducts, canals, culverts and water treatment plant
- Sealing of joints in traffic areas such as, bridges, roads and car parking areas

Technical Information

Sr.No.	PROPERTIES	SPECIFICATION
1	Nature	Two Component
2	Mixing Ratio	92 : 8
3	Consistency after mixing	Thick non-sagging paste
4	Application time (pot life) at 30° C	2 - 3 hours
5	Setting time at 30° C	Max. 24 hours
6	Complete curing time, at 5° C at 15° C at 25° C at 30° C	8 weeks 4 weeks 2 weeks 1 week
7	Color-Base compound	White / Off White
8	Accelerator (curing compound)	Dark brown to black
9	Mix compound	Grey
10	Slump (sag) resistance	Non-Sagging
11	Tack Free Time	16 hrs. max
12	Elongation (%)	>500
13	Tensile strength	3 kg/cm ² min.
14	Peel strength (concrete)	1 kg/cm min.
15	Hardness Shore A	Min 15
16	Recovery (%)	>80
17	Abrasion resistance	Excellent
18	Chemical and solvent resistance	Excellent
19	Flame resistance	Excellent

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Application Methodology

● Surface Preparation

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

● Back Up Materials

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 742: For porous substrate such as concrete, wood etc.
- Primer 747: 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 rpm.

● Application

Apply the mixed pour grade compound by means of a spatula or by filling into a plastic cartridge which is then placed into the hand held caulking gun into the joint.

● 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 :

Sealant : To estimate the no. of running meter work done in 1 kg of Mahaseal PS 740 required to seal the join can be very easily estimated by using the following formula:-

Mahaseal PS-740:- $L = 650 / (W \times D)$

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. Primer is required per 15 kgs of sealant.

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Packing

4kg & 6.5 kg.



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.



Cleaning of Tools & Equipments

Tools and equipment should be cleaned with suitable solvent immediately after use.

Ecology, Health and Safety

Health & Safety instructions, all chemicals should not come in contact with skin and eyes or be swallowed. Protective gloves and goggles should be worn.

If contact with skin occurs, wash well with soap and water.

Eye contamination should be washed thoroughly with clean water and medical advice sought. If swallowed seek medical attention immediately. Do not induce vomiting.

Disclaimer

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Our guarantee applies within the context of the statutory regulations and provisions in force, current professional standards and in accordance with the stipulations set out in our general sales conditions.

The information detailed in the present technical data sheet is given by way of indication and is not exhaustive. The same applies to any information provided verbally by telephone to any prospective or existing customer.



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