



**SILKON**  
ADDITIVES INDIA PVT LTD

# Silkon PS-500

Silkon PS-500 is a two part sealant based on a liquid polysulphide polymer. This is available in two grades Gun grade and Pourable grade. Silkon PS-500 PG is a Pourable version designed for use in horizontal joints. Adhesion is excellent to most common building substrates. The product is particularly recommended for sealing horizontal structural expansion joints in most civil engineering structures like building superstructures, subways, basements, floors and reservoirs.

## Product usages and advantages

- Forms a tough elastic rubber-like seal.
- Accommodates continuous and pronounced cyclic movement.
- Excellent adhesion to most common substrates.
- High resistance to ageing influences, physical damage and climatic extremes.

## Standards compliance

British Standard BS:4254:1983  
U.S.Federal Specification : TT-S-00227E November 1969 (amended 1970) IS12118 (PT 1&2) - 1987  
IRMRA certification ASTM C920-87, Type M, grade NS, Class 25.

## Description

Silkon PS-500 is a two part joint sealant based on a liquid polysulphide polymer. It is supplied as a 2.5 L pack containing a base component and curing agent in the correct proportions which, when mixed together, cure to form a tough rubber-like material. When cured, the sealant exhibits excellent adhesion to most surfaces including concrete, aluminium and stainless steel. Priming is recommended for porous surfaces and for some specific surfaces and applications.

Silkon PS-500 is available in two grades. Gun grade for general applications and Pouring grade for joints in horizontal surfaces. Silkon PS-500 is particularly recommended for use in high rise buildings and other applications where access for subsequent maintenance will be difficult and the risk of early movement failure must be minimised. It is also suitable for sealing joints in subways, basements, retaining walls, reservoirs and brickwork joints.

## Joint size

Silkon PS-500 may be applied to horizontal joints between 5 and 50 mm wide. Joints which are expected to experience cyclic movements should be designed to an optimum width : depth ratio of 2:1 subject to the overriding recommended minimum sealant depths set out below :

5 mm for metals, glass and other nonporous surfaces. 10mm for all porous surfaces;

20 mm for trafficked joints and those subject to hydrostatic pressures.

To ensure that the sealant remains within its stated movement capacity (25% MAF) the width of the designed sealing slot should be in accordance with the recommendations of BS:6093:1981 6.2.2 and 6.2.6.

## Technical Support

The Company provides a technical advisory service supported by a team of specialists in the field.

## Properties

Property	Result
Form	Two-part Compound Base : paste Curing agent : paste
Color (Mixed Material)	Grey
Flash Point	Over 65°C
Storage Life	12 months in original containers in dry conditions within the range 5°C -27°C
Solid Content	100%
Density	1.6 – 1.65 Kg/Ltr
Curing Change	Chemical Cure
Application Temperature	5°C to 50°C
Pot Life	Min. 2 Hrs at 25°C
Setting Time	72 hours at 5°C 36 hours at 15°C 18 hours at 25°C
Curing Time	4 weeks at 5°C 2 weeks at 15°C 1 week at 25°C
Water immersion	Silkon PS-500 must be fully cured before permanent immersion in water.
Shore 'A' Hardness @ 25°C	18±2



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Toxicity : The curing agent contains heavy metal oxide. It does not contain Phenol. Cured sealant must not be burned off as toxic fumes are generated. When used for sealing joints in potable water tanks, the maximum permissible heavy metal content of 0.1 p.p.m. is not reached until the surface area of the sealant exceeds 9.5 mm<sup>2</sup>/litre of water, it is recommended that the exposed sealant surfaces should not exceed 5mm<sup>2</sup>/litre of water.

## Chemical resistance to occasional spillage

Dilute acids	resistant
Dilute alkalis	resistant
Petrol resistant	
Aviation fuels	resistant
Diesel fuel	resistant
Kerosene	resistant
Lubricating oils	resistant
White spirit	resistant
Chlorinated solvents	not resistant
Aromatic solvents	not resistant
Dilute oxidising acids	not resistant
Biological	Sikon PS500 has been evaluated resistance in micro- biologically active situations and has been shown to have resistance to aerobic conditions.
Movement accommodation factor (MAF) :	25% butt joint, 50% lap joints ( see also under 'Joint size )

## Application Methodology

### Joint preparation

The joint surfaces must be thoroughly dry, clean and frost free. Remove all dust and laitance by rigorous wire brushing, grinding or grit-blasting. Remove all rust, scale and protective lacquers from metal surfaces. Remove any oil or grease with any suitable solvent. Any expansion joint filler must be checked to ensure it is tightly packed and no gaps or voids exist at the base of the sealing slot, before positioning a bond breaker. For construction or contraction joints breaker or back up tape should be used. Where hydrostatic pressure exists, only bond breaking tapes must be used not foamed back-up strips. Where a particularly neat finish is required, mask the face edges of the joint before priming and remove immediately after tooling is completed

## Mixing

### Gun grade

Both the base component and curing agent are supplied ready for mixing in a single tin. Mix thoroughly using a slow speed drill (300-500 rpm) fitted with a paddle stirrer for a full 5 minutes. Only thorough mixing will result in proper curing. In cold weather Silkon PS500 mixes more easily if stored overnight at room temperature. Immediately after mixing, load the sealant into the gun by means of Gun Filling Device and apply to the joint.

### Pouring grade

Silkon PS500 pouring grade is supplied in two separate containers. The small container contents should be poured into the other tin, and mixed as per the gun grade instructions. The pouring grade may be poured directly into horizontal joints or loaded into the Gun for application to horizontal joints less than 15mm wide.

## Packaging

Silkon PS500  
(Both Gun Grade and Pourable Grade) 2.5 L pack

## Volume Calculations

Joint size	Litres/ run meter	Meter run / in mm 2.5L pack
5 x 5	0.025	100.00
10 x 5	0.050	50.00
10 x 10	0.100	25.00
20 x 10	0.200	12.50
15 x 10	0.300	8.33
20 x 20	0.400	6.25
40 x 20	0.800	3.12
40 x 25	1.000	2.50
40 x 30	1.200	2.08
40 x 40	1.600	1.56
50 x 25	1.250	2.00
50 x 30	1.500	1.66
50 x 40	2.000	1.25
50 x 50	2.500	1.00



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## **Storage and Shelf Life**

Silkon PS500, polysulphide sealant shall be stored in cool, dry conditions in original tightly sealed containers. The shelf life of Silkon PS500 is 12 months.

## **Health and Safety**

Silkon PS500, polysulphide sealant is poisonous. The curing agent consists of a heavy metal based oxide. Skin contact shall be avoided. Impervious rubber or PVC gloves and eye protection shall be worn. Hands shall be thoroughly washed with soap and water before eating or smoking. Cured sealant should not be burnt off due to the generation of toxic fumes. Empty containers must be collected for careful disposal and not left lying about. Hands shall be washed thoroughly before eating or smoking. In the case of eye contact, medical attention shall be sought immediately.