



BITUSUL PS+

2 Part Gun Grade Polysulphide Joint Sealant

DESCRIPTION

BITUSUL PS+ is a two component non slumping, chemically curing sealant for wide joints. It is based on a liquid polysulphide polymer which when mixed with the hardener, cures to form a tough, flexible and non staining rubber like seal.

BITUSUL PS+ is specifically designed to be used as a watertight seal for overhead moderate movement joints and joints with widths greater than 30mm.

BITUSUL PS+ has excellent adhesion to concrete, stone, metals and other common building substrates. The cured sealant has good resistance to most environmental chemicals & resists deterioration on prolonged exposure to UV. The sealant has a movement Accommodation Factor (mAF) of $\pm 25\%$.

TYPICAL USES

- Overhead and vertical movement and control joints
- Joint width between 30mm and 50 mm

ADVANTAGES

- Highly resilient with excellent recovery characteristics
- Provides permanent and uniform watertight seal
- Non-staining

- Excellent resistance to fatigue and stays flexible throughout its service life - won't become brittle, caulk or crack due to ultra violet exposure
- Prevents uncontrolled cracking by allowing expansion and contraction during temperature changes
- Excellent adhesion to most common building substrates
- Good resistance to ageing. retains joint soundness once cured resistance against mild chemicals, hydrocarbon fuels, sea water
- Non-toxic. Can be used in potable water applications, swimming pools

TECHNICAL PROPERTIES

(The properties shown below were obtained under laboratory conditions).

Color	Grey
Density	1.6 \pm 0.03 g/cc
Viscosity	Thixotropic paste
Shrinkage	Negligible
Application Life	>120 minutes
Shore A Hardness	20=35
Tack free time	5 hours
Adhesion to concrete,	>25 N
UV Resistance	No Deterioration
Water Potability	Passes

Chemical resistance	pH 2.5 to 11.5, Hydrocarbon fuels, vegetable oil, urea, seawater
Initial cure @ standard condition, [hrs	24 hours
Final cure @ standard condition, [day)	7 days
Application temperature, [°C]	5 to 50 deg C
Service temperature, [°C] -20 to 70	-20 TO 70 deg C

APPLICATION INSTRUCTION

JOINT PREPARATION

The joint surface must be clean, dry and free from oil, loose particles, cement laitance and other contaminants which may affect the adhesion. A thorough wire brushing, grinding, sand blasting or solvent cleaning may be required to expose a clean and sound substrate. The compressible joint filler shall be cut back to expose a uniform joint depth.

PRIMING

Primer should be applied to clean, dry surface prior to the installation of backer rod or bond breaking tape. The primer shall be applied by a brush in a thin coat application and shall be allowed to become tack free prior to the application of the sealant.

The joint edges shall be re-primed if the sealant is not carried out within 3 hours of application of the primer. For obtaining a clean and neat finish, masking tape shall be applied on both the edges of the groove before applying the primer.

BACK-UP MATERIAL

A bond breaking backing rod shall be inserted into all movement joints to avoid a

three sided adhesion. Use of a backing rod will ensure proper joint depth and at the same time facilitate the formation of an hour glass profile on the applied sealant.

The backer rod will also provide resistance to sealant tooling pressure and help to attain proper wetting of the substrate when the sealant is being tooled. The backing rod being inserted into the joint shall be of a diameter which is at least 20% larger but not greater 33% of the joint width.

This will ensure that the backer rod remains in compression and in place during sealant installation. For static and joints where the depth is not sufficient for the use of the backing rod, a bond breaking tape may be applied to prevent the three side adhesion.

CAUTION: Do not damage or poke holes in the Backer rod during or after installation, since this may cause air bubbles in the sealant and affect its performance.

MIXING&APPLICATION

BITUSUL PS+ is available in a ready to mix container, with all the components packed in a single tin. The material shall be mixed thoroughly with a slow speed drill (300-400 rpm) fitted with a flat bladed paddle for 2-3 minutes till a uniform colour and consistency is achieved.

DO NOT PART MIX. Since the base and the curing agent ratio controls the ultimate physical properties like adhesion, durability and strength, one complete kit has to be mixed at a time.

The side and base of the container shall be periodically scrapped with a scrapper to

ensure that the curing agent is properly dispersed and blended into the mix.

Load the sealant immediately into the barrel gun by a heavy duty follower plate. Remove the cap and nozzle from the gun and ensure that the plunger is pushed all the way forward. The follower plate shall be placed on the flat surface on top of the pail.

Place the barrel gun over the lip of the follower plate and depress the release plate and draw the material into the barrel by pulling back the plunger slowly. Fix the nozzle and start extruding into the joint firmly by maintaining an even pressure on the trigger of the gun.

On vertical joints, sealant extrusion shall start from the bottom of the joint and continued to the top. Overhead sealing shall start from one end of the joint.

For deep vertical joints, the sealant shall be filled in 2 to 3 applications in order to avoid air entrapment and sagging. Once the sealant has been installed a suitable rounded tool soaked in a soapy water solution can be used to achieve a smooth hour glass profile. Any masking tape applied should be removed immediately after the sealant is installed.

LIMITATIONS: BITUSUL PS+ is not recommended for:
 Joints greater than 50mm width
 Overhead joints Movement joints having MAF >25%
 Damp and contaminated surfaces
 Asphalt pavements
 Over painting (paint compatibility with sealant shall be checked prior to painting)

JOINT DESIGNS

The width of the joint should be a minimum of 4 times the anticipated movement. Joints with cyclic movement should have a width to depth ratio of 2:1 for butt joints and 1:1 for floor, static and lap joints.

The joint depth shall not exceed the width. The joint width and depth should be maintained as recommended:

- Joint Width 6 mm (minimum) 30 mm (maximum)
- Joint Depth 6 mm (minimum for porous surfaces) 5 mm (minimum for non porous surfaces)
- 20mm for heavily trafficked floor joints and areas exposed to hydrostatic pressure

COVERAGE

Length of joints in meters filled per 1 Ltr of BITUSUL PS+

	Depth (mm)			Width (mm)	
	20	25	30	40	50
10	5				
15	3.3	2.60	2.2		
20	2.5	2.00	1.6	1.25	
25		1.60	1.3	1.00	0.80
30			1.10	0.80	0.66
40				0.60	0.50
50					0.40

PACKAGING: 2.5 Liters

STORAGE

Store under cover, out of direct sunlight, clear of the ground on pallets and protect from extreme temperatures. In tropical climate the product must be stored in air conditioned environment (<25°C).

PRECAUTIONS

As with all construction chemicals products caution should always be exercised. Protective clothing such as gloves and goggles shall be worn.

Remove all excess sealant with a scraper. Any spillage can be cleaned using a good solvent. Hardened materials can be removed mechanically only. Allow the waste to cure. Seal it into a suitable container and bury in landfill as per the local regulations.

Clean all tools and equipments using similar solvent immediately after the tooling. Hardened materials can be removed mechanically only.

Treat any splashes to the skin or eyes with fresh water immediately.

Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

There are no known health hazards associated with BITUSUL PS+

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