

# Polyseal PU PF

## 2 part pitch free polyurethane sealant

Chemical & fuel resistance, pitch free environment friendly joint sealant with higher flexibility.



### CHARACTERISTICS

- ▶ Good resistance to chemicals, aviation fuels, hydraulic fluids and hydrocarbon fuels
- ▶ Self leveling- Easy to apply
- ▶ High movement capability
- ▶ Pitch free. Environmental friendly
- ▶ Excellent resistance to ageing and weathering
- ▶ Non-staining



### DESCRIPTION

Polyseal PU PF is a two component pitch free, self-leveling, chemically curing polyurethane resin based joint sealant. Polyseal PU PF is specifically designed for dynamic joints in concrete roads, runways, pavements. It is based on a liquid polyurethane polymer which when mixed with the hardener, cures to form a tough, hard wearing seal which has excellent resistance to fuels, oils and chemicals. Polyseal PU PF is suitable for use in horizontal areas with a maximum slope gradient of 10%. The sealant has a movement accommodation factor (MAF) of  $\pm 25\%$ .

### FIELDS OF APPLICATION

Sealing of movement and control joints in:

- concrete runways, aprons, pavements
- fuel and chemical spillage areas
- sealing of floor joints in car parking decks, warehouses
- highways & bridges

### APPLICATION INSTRUCTIONS

#### 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.



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#### Priming

Primer should be applied to a clean, dry surface prior to the installation of backer rod or bond breaking tape. Polyprime PS\* is recommended to be applied on porous substrates. 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 installation 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 (Polyrod) shall be inserted into all movement joints to avoid a three sided adhesion. 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.

### MIXING & APPLICATION

Polyseal PU PF is supplied in pre-weighed two part packs, which requires on site mixing. Pour the hardener (Part B) into the base (Part A) pail and mix thoroughly with a slow speed drill (300-400 rpm) fitted to a flat bladed paddle for 1-2 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 in themix. Pour the mixed material directly into the joint from the pail. Initially fill 2/3rd of the sealant, tool it properly allowing it to fill all the irregular areas inside the joint. The tooling will also allow the entrapped air to escape. Then pour the balance 1/3rd material and further tool it to get a smooth surface finish. The material should be used completely within the specified pot life. Once the sealant has been installed a suitable rounded tool can be used to achieve an hour glass profile. Any masking tape applied should be removed immediately after the sealant is installed.

### LIMITATIONS

Polyseal PU PF is not recommended for:

- Joints with slope gradient greater than 10%
- movement joints having maf >25%
- damp and contaminated surfaces
- asphalt pavements
- over painting (paint compatibility with sealant shall be checked prior to painting)
- Joint >50mm width

### CLEANING

Remove all excess sealant with a scrapper. Any spillage can be cleaned using Polysolvent. Clean all tools and equipments using similar solvent immediately after the tooling. Hardened materials can be removed mechanically only.

### JOINT DESIGNS

Joints with cyclic movement should have a width to depth ratio of 1:1 to 1½ :1. The joint depth shall not exceed the width.

### COVERAGE

Length of joints in meters filled per 1 l of Polyseal PU PF

Depth [mm]	Width [mm]						
	10	15	20	25	30	40	50
10	10	6.7	5				
15		4.4	3.3				
20			2.5	2	1.6	1.25	
25				1.6	1.3	1	0.8
30					1.1	0.83	0.67
40						0.62	0.5
50							0.4

# Calculation based on theoretical coverage. Actual material consumption at site will vary depending on the wastage.

### STANDARDS

Polyseal PU PF complies with the requirements of BS 5212: part 1, ASTM C 920 [Type M, grade P, class 25, use T] & SSS-200 E (for jet fuel resistance)

### STORAGE & SHELF LIFE

Store in a cool, dry place and keep away from all sources of heat and sunlight. In tropical climates, store in air condition

rooms. The shelf life is up to 12 months in un-opened conditions and if stored as per recommendations. excessive exposure to sunlight, humidity and uV will result in the deterioration of the quality of the product and reduce its shelf life.

### HEALTH & SAFETY

As with all construction chemical products caution should be exercised. Refer the product msds for full details. protective clothing such as gloves and goggles should be worn. 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.

### SUPPLY

Polyseal PU PF	4L kit
Polyprime PS	1L pail
Polysolvent	5L & 20L pails
Ancillaries/equipments	Polyrod

\* Refer to website for TDS

### TECHNICAL SPECIFICATION

PROPERTIES	VALUES	TEST STANDARDS
Color	Grey/black (colors on request)	-
Density, [g/cc]	1.50±0.05	-
Consistency	Free flowing	-
Application life, [minutes]	20	BS 4254
Shore 'A' Hardness	25-40	ASTM D 2240
Chemical resistance	pH 2.5 to 11.5, Hydrocarbon fuels, aviation fuel, Hydraulic fluid, sea water.	ASTM D 543
Initial cure @ standard condition, [hours]	24	-
Full cure @standard condition, [days]	7	-
Application temperature, [°C]	+5 to +40	-
Service temperature, [°C]	-20 to 80	-

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.