

## **brix seal pgg 510**

### **HIGH PERFORMANCE, ELASTOMETRIC SEALANT FOR MOVEMENT JOINTS**

#### **SPECIFICATION TYPE**

ASTM C920 : (G. Grade)

BS 4254

BS 5212 : Section = Fuel Resistance

BS 5212 : (Pouring Grade)

US Federal Specification TT-S-00227E Class A

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#### **DESCRIPTION**

BRIX SEAL (PGG) consists of a specially formulated blend of liquid polysulphide polymer, plasticisers and fillers. When mixed with curing agent it forms a tough, flexible, durable, rubber like material which adheres to most common construction surfaces. It is used for sealing horizontal & vertical joints.

#### **TYPICAL APPLICATIONS**

Because of its ability to recover many times without losing adhesion, and its excellent resistance to many oils, solvents and other chemicals. BRIX SEAL (PGG) is extensively used to provide fully waterproof seals in joints subject to high degree of deformation or continuous cyclic movements. It is normally used for joints in bridges, concrete pavements, floors, pre-cast concrete constructions, subways, basements & building super structures.

#### **APPEARANCE**

BRIX SEAL (PGG) is available in light Grey colour.

#### **PROPERTIES**

Typical properties of BRIX SEAL (PGG) are as follows :

Service temperature limits	:	-23°C to +100°C
Application temperature limit	:	+5°C to + 40°C
Total solids	:	99%
Shrinkage	:	Negligible
Pot Life of 20°C	:	2 hours
Initial Set at 20°C	:	24 hours
Full cure at 20°C	:	2 weeks
Shore 'A' hardness at 25°C (full cure)	:	25
Flammability	:	Burns with difficulty
Chemical resistance	:	Very good (see overleaf)
UV resistance	:	Very good

SG	:	1.6
Movement Accomodation factor (MAF)		
Butt joints	:	25% (0.125%)
Lap joints	:	50% (0.25%)

### **ADVANTAGES**

- ☒ Excellent Adhesive.
- ☒ When cured, it gives a tough, flexible, elastomeric weather proof and watertight seal.
- ☒ Suitable for joints in critical applications.
- ☒ Excellent storage stability
- ☒ Resistant to oils, fuels, solvents and Common chemicals.

### **JOINT DESIGN**

BRIX SEAL (PGG) is suitable for application in joints between 6 and 60 mm wide. For porous substrates, minimum sealant depth is 10 mm for nonporous substrates the minimum depth is 6 mm. For horizontal joints a minimum depth of 12 mm should be maintained and for joint subject to traffic or hydraulic pressure, minimum depth should be 20 mm. If the joints are subject to cyclic movement, they should be designed ideally to give an optimum width/depth ratio of 2:1.

### **BACKUP MATERIAL**

When using filler boards, it should be raked out to the correct depth before applying the sealant. In expansion joints, movement accomodation of sealant will be restricted if it bonds to the fillers board. It is therefore, essential to insert BOND BREAKING TAPE into the joint in order to prevent adhesion.

Alternatively, JOINT SEAL SUPPORT STRIP may be used. This is a closed cell polyethylene form and may be used when fully removable forms have been used in the construction of the movement joint. It can also be used together with the Filler Board instead of Bond Breaking Tape. The support strip can be used to provide the correct joint depth and as it has a circular cross section, it gives an ideally shaped mould for the sealant. Care should be taken not to limit or deform the support strip as this will result in a variable joint depth leading to possible failure when movement occurs.

### **DIRECTIONS FOR USE**

#### **Preparation of Substrate :**

Surfaces must be completely dry and free from all dirt, dust, cement laitance and any deleterious matter. This can be achieved by thorough wire brushing or grit blasting, followed by blowing clean with oil free compressed air. Metallic surfaces must be free of rust, scale or protective lacquers.

#### **Priming :**

Use BRIX SEAL PRIMER No.1 on porous surfaces such as concrete, brick, stone etc., and BRIX SEAL PRIMER No.2 on low porosity surfaces such as steel, glass glazed ceramics etc.

Priming of the joint faces should be carried out shortly before application of the sealant. Pour a small amount of the primer into a clean metal container, ensuring that the main container is tightly resealed. Liberally apply a coat of primer with a soft brush to the required surface and allow to become dry/tack free (30-60 minutes) before application of the polysulphide sealant. If primer is left for more than 3 hours, re-priming is necessary.

#### **Consumption of Primer :**

BRIXSEAL PRIMER approx. 3 to 5% of quantity of Joint Seal depending on porosity and texture of surface.

The curing agent is in a separate, smaller container fixed to the top of the larger container, which contains the polymer base. The full quantity of curing agent must be transferred into the large container. Do not transfer to any other containers for mixing.

Mixes best achieved using a flat bladed stirrer coupled to a slow speed (150 rpm) electric drill. Mix for 4 minutes paying particular attention to the sides of the container. When thoroughly mixed both components should be completely dispersed and the material be of uniform colour. In cool conditions mixing is easier if containers are stored at approximately 20<sup>0</sup>C for 24 hours before use.

#### **GUIDE FOR APPLICATION**

When thoroughly mixed it should be loaded into SEALANT GUN and applied to the joint, alternatively, wooden spatula may be used for inserting sealant into joint.

#### **Finishing:**

In order to displace any air bubbles present in the sealant caused by mixing and to get adhesion, it is advisable, to finish by tooling with a rounded spatula or similar object. The outermost surface of the sealant should finish with a slightly concave profile. On no account must moistened fingers be used. Protect the finished seal from inclement weather until initial set has taken place and when the surface skin is clearly visible.

## EQUIPMENT CARE

Clean all tools and equipment with BRIXSEAL CLEANER 2 immediately after use. BRIX SEAL (PGG) can be removed from hands by means of industrial hand cleaners.

## COVERAGE RATE

Meters per kg of BRIX SEAL (PGG).

		Joint Depth in mm					
		6	12	20	25	30	40
Joint Depth in mm	6	17.6	8.8	-	-	-	-
	10	-	5.3	3.2	-	-	-
	12	-	4.4	2.6	2.1	-	-
	15	-	-	2.1	1.7	1.4	-
	20	-	-	1.6	1.3	1.1	0.8
	25	-	-	-	1.0	0.8	0.6

NB : These figures do not include wastage.

## CHEMICAL RESISTANCE

Occasional Spillages

Petrol, diesel and aviation fuel: Resistant

Kerosene: Resistant                      Aromatic Solvents: Resistant

White Spirit: Resistant                      Chlorinated solvents: Poor

Lubricants: Resistant                      Dilute acids: Resistant

Xylene : Resistant                      Dilute alkalis : Resistant

## CURE PERIOD

Cure period and initial setting is affected by ambient temperature. In general terms, the higher the temperature the faster the set and cure.

Cure continues after setting. Examples of set and cure times are shown in Table 2.

Property	Table 2 Typical set and cure time			
	Ambient Temperature			
	5°C	10°C	20°C	35°C
Pot-Life	24 hrs	18 hrs	5 hrs	1.5 hrs
Initial Set	72 hrs	48 hrs	24 hrs	3 hrs
Full Cure	8 wks	5 wks	2 wks	7 days

All figures are approximate and are based on constant temperature and humidity. It is not recommended to apply BRIX SEAL (PGG) below 5°C.

**PACK SIZE**

Available in 1 and 4 kg packing.

**STORAGE**

BRIX SEAL (PGG) should be stored indoors in a cool, dry environment. Shelf life approximately 12 months.