

Flexseal PS700

Elastomeric high-performance cold-applied fuel resistant pavement joint sealant



DESCRIPTION

Flexseal PS700 is a two-component, chemical curing, cold applied, fuel and oil resistant pitch-free polysulphide sealant designed for use in all types of concrete pavement joints and specifically for sealing joints in airport pavement construction. Flexseal PS700 has excellent adhesion properties to asphalt substrates.

APPLICATIONS

Flexseal PS700 is designed for:

- » Sealing all types of joints in airport runways and aprons.
- » Sealing all types of joints in car parks and traffic decks.
- » Sealing all types of joints in warehouses, oil terminals, docks, and harbours.
- » Sealing all types of joints in sewage treatment plants.
- » Suitable for horizontal joints only.

ADVANTAGES

- » Pitch-free
- » Fuel and oil resistance.
- » Cold applied chemical curing sealant.
- » Suitable for all climate conditions, weathering, and UV resistance.
- » Suitable for manual and machine processing
- » Excellent movement accommodation.
- » Pourable and self-leveling.
- » Good chemical resistance to a wide range of mild alkalis, diluted acids, and solvents.
- » Excellent chemical resistance to aviation hydraulic fluids (i.e. Skydrol®).

STANDARDS

- » US Federal Specification SS-S-200E:1984.
- » British standard 5212:1990, Type N, F and FB.
- » ASTM C920, Type M, Grade P, Class 25, Use NT, T₁, and M.

METHOD OF USE

SUBSTRATE PREPARATION

Concrete surfaces must be sound, dry, dimensionally stable, and fully cured (not subject to shrinkage). All surfaces should be clean of dirt, laitance, bitumen, foreign matter, and curing compounds. Substrate should be free from oil, grease, dust or, any contamination



TECHNICAL PROPERTIES:

| | |
|--|-------------------------------|
| Colour: | Black and grey |
| Mixed density: | 1.45 ± 0.05 g/cm ³ |
| Solid content: | 100% |
| Application temperature: | 5 to 40°C |
| Pot life: | 30 - 50 min @ 25°C |
| Movement accommodation: | 25% |
| Curing type: | Chemical cure |
| Tack free time: | 4 - 5 hr |
| Service temperature: | -40 to 90°C |
| Shore A hardness: ASTM D2240 | ≥ 25 @ 7 days |
| Elongation at break: ASTM D412, Die C | ≥ 290% @ 7 days |
| Tensile strength: ASTM D412, Die C | ≥ 0.50 MPa @ 7 days |
| VOC: | < 50 g/ltr |

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Chamfer the joint edges with a face width of 3 to 10 mm. After cleaning, a backing rod of an appropriate size should be placed in the joint to the required depth to ensure proper layer thickness and prevent three-point adhesion. Care should be taken not to puncture the backing rod during installation as punctures might create bubbling.

PRIMING

Flexprime Universal is a low viscosity single component primer suitable for use with porous and non-porous surfaces. Flexprime Universal is recommended to be used for concrete substrates.

Using small brush apply one thin coat at the joint sides and avoid over priming. Apply the mixed Flexseal PS700 sealant while the primer is still tacky to achieve optimum adhesion strength.

For asphalt substrates, it is recommended to use Aquathane Primer W to ensure optimum adhesion. Depending on the substrate porosity, apply one or two coats of Aquathane Primer W at the joint sides using a small brush or roller and allow to become tack free. Apply the mixed Flexseal PS700 sealant while the primer is still tacky to achieve optimum adhesion strength.

MIXING

To ensure proper mixing, a mechanically powered mixer should be used. Flexseal PS700 is supplied in two components, Part A and Part B, with a mixing ratio of 5:1. The full quantity of the two components must be mixed thoroughly for 3 - 5 minutes.

APPLICATION

Flexseal PS700 should be applied using a suitable pump system with a 5:1 mixing ratio by volume. Refer to the pump manufacturer recommendations for application and inject the sealant with a continuous, smooth action starting at the bottom of the joint to the top.

Alternatively, the mixed sealant can be applied into the primed joints using an air-powered sealant gun, the sealant should be loaded into the gun after removing the cap and pulling back the plunger rod. Inject the sealant with a continuous, smooth action starting at the bottom of the joint to the top.

Flexseal PS700 is self-leveling and does not require finishing. The finished level of the sealant is recommended to be recessed below the trafficked surface as insufficient recess can expose the sealant to vehicle tires which might cause damage over time.

Performance Characteristics in accordance with SS-S-200E

| | | |
|--|---------------------|--|
| Self-leveling: | On plane level | < 3.2 mm (pass) |
| | With 1.5% inline | < 1.6 mm (pass) |
| Change in mass by fuel immersion: | | < 2% (pass) |
| Accelerated aging: | | Pass |
| Change in volume on exposure to elevated temperatures: | | < 5% (pass) |
| Resilience: | Recovery | > 75% (pass) |
| | Initial penetration | 0.5 - 2.0 mm (pass) |
| Artificial weathering: | | No surface softening, presence of an oil-like film, reversion to a mastic-like substance, or formation of surface blisters" Volume change < 5% (pass) |
| Bond to concrete: (water immersed, non-immersed, & fuel immersed)* | | No cracking, separation or crazing (pass) |
| Resistance to flame: | | Pass |
| Flow: | | No evidence of cracking, sag or dimensional change (pass) |

**With priming using Flexprime Universal.*

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SEALANT QUANTITY ESTIMATOR

| Joint size (mm) width x depth | Meters per litre |
|----------------------------------|------------------|
| 10 x 10 | 10.00 |
| 13 x 13 | 5.91 |
| 15 x 15 | 4.44 |
| 20 x 10 | 5.00 |
| 20 x 20 | 2.50 |
| 25 x 12 | 3.33 |
| 25 x 25 | 1.60 |
| 30 x 15 | 2.22 |
| 40 x 20 | 1.25 |
| 50 x 25 | 0.80 |

Note: actual consumption depends on the nature of substrate, method of application, and wastage.

JOINT SIZE SUITABILITY

Joint width:*

- » 10 mm (minimum).
- » 50 mm (maximum in trafficked areas).

Joint depth:

- » 10 mm minimum.
- » 25 mm maximum.

*Width: Depth ratio***

- » 2:1

**For wider joints please consult DCP Technical Department.*

***Within above min/max restrictions.*

REMARKS

- » While mixing and injecting the material, ensure not to incorporate too much air.
- » The curing speed depends on the temperature, as working in high ambient temperatures will cause the material to cure faster, while at low ambient temperature the material will take longer to cure.
- » Application should not be undertaken if the temperature is below 5°C.
- » Flexseal PS700 should be conditioned at $25 \pm 2^\circ\text{C}$, if to be applied using two component pump system at higher or lower ambient temperatures.

CHEMICAL RESISTANCE

Occasional spillage after full cure (7 days @ 25°C), ASTM D1308 (Spot - test @ 1 hr)

Organic Acids

Citric Acid 25% RS

Aqueous Solutions

Sodium Chloride sat R

Tap Water R

Chlorinated Water RS

Dead Sea Water R

Solvents

White Spirit R

Xylene R

Toluene R

Acetone R

Oils & Fuels

Brake Fluid R

Engine Oil R

Diesel R

Kerosene R

Jet Fuel R

Petro R

Hydraulic Oil R

Mineral Oils R

Skydrol® R

Inorganic Acids

Sulphuric Acid 25% RS

Hydrochloric Acid 10% RS

Nitric Acid 10% RS

R: Resistant

RS: Resistant with slight discolouration

SS: Slight softening



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CLEANING

All equipment should be cleaned immediately after finishing using an appropriate solvent. Hardened sealants should be removed mechanically.

PACKAGING

Flexseal PS700 is available in 4 ltr (5.8 kg), and 12 ltr (17.4 kg) kits.

Flexprime Universal is available in 1, 4 and 20 ltr packs.

STORAGE

Flexseal PS700 has a shelf life of 12 months from the date of manufacture if stored in its original packaging at temperatures between 5°C and 25°C and away from moisture or direct sunlight.

If these conditions are exceeded, contact DCP Technical Department for advice.

CAUTIONS

HEALTH AND SAFETY

Flexseal PS700 should not come in contact with skin or eyes. Goggles and gloves should be used.

In case of accidental contact with eyes, immediately flush with plenty of water for at least 10 minutes and seek medical advice if necessary.

For further information, refer to the Safety Data Sheet.

FIRE

Flexseal PS700 is nonflammable.

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- » Grouts and anchors.
- » Concrete repair.
- » Flooring systems.
- » Protective coatings.
- » Sealants.
- » Waterproofing.
- » Adhesives.
- » Tile adhesives and grouts.
- » Building products.
- » Structural strengthening.

Note:

We endeavour to ensure that any information, advice or recommendation we may give in product literature is accurate and correct. However, because we have no control over where and how products are applied, we cannot accept any liability arising from the use of the products.