



Method Statement

Ref. #: DCP00/07-0079-C-2022



Flexseal PS700

(Elastomeric High-performance Cold-applied Fuel Resistant
Pavement Joint Sealant)



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Section A: General Comments

General Notes:

The information below is a detailed overview of the application of DCP's **Flexseal PS700** sealant system and should be read in conjunction with the relevant technical data sheet prior to application. All DCP Products should be applied by experienced specialist contractors.

All the points below assume the correct preparation of the relevant surface.

High-Temperature Working:

Application temperature ranges from 5°C - 40°C. However, it is suggested that, for temperatures above 35°C, the following guidelines are adopted as good working practice:

- i. Unmixed materials and equipment should be stored in a cool shaded area and away from direct sunlight.
- ii. Avoid application during the peak temperature of the day.
- iii. Plan for enough materials, tools, and labor to ensure a continuous applicant process.
- iv. It is also possible for application in high temperatures to have a cooled vehicle available on site to store the material while working along the pavement joint.

Low-Temperature working:

It is suggested that, for temperatures below 10°C, the following guidelines are adopted as good working practice:

- i. Unmixed materials should be stored in a warm.
- ii. Substrate's temperature must be at least 3°C above measured dew point temperatures if any.
- iii. Do not apply under rain or snow, and avoid dew points conditions during application.
- iv. Avoid applying the grout if the temperature is around 5°C and falling.

System Products:

Primer: **Flexprime Universal**.

Sealant: **Flexseal PS700**.

Backing Rod: **Cellrod**

Tools and Equipment:

It is suggested that the following list of equipment are adopted as a minimum requirement


- | | | |
|--------------------------------------|--|---|
| <i>Personal protection</i> | <ul style="list-style-type: none"> : Protective overalls : Goggles or a face mask : Good quality gloves : Safety shoes : Safety helmet |  |
| <i>Preparation tools</i> | <ul style="list-style-type: none"> : Stiff wire brush (Fig.1) : Soft brush (Fig.2) : Low-pressure sprayer (Fig.3) : Backing rod (Fig.4) : Masking tape (Fig.5) : Rover backing rod installer or roller (Fig.6) | |
| <i>Sealant application equipment</i> | <ul style="list-style-type: none"> : Two component dispense/pump with 5:1 mixing ratio by volume (Fig.7) or, : Air powered sealant gun (Fig.8) or, : Pressure vessel and lance (Fig.9) | |



Fig.1: Stiff wire brush



Fig.2: Soft brush



Fig.3: Low-pressure sprayer



Fig.4: Backing rod



Fig.5: Masking tape



Fig.6: Rover backing rod installer or roller



Fig.7: Two component dispense/pump



Fig.8: Air powered Sealant gun



Fig.9: Pressure vessel and lance

Section B: Application

Please note that the quality and durability of the sealant are determined by using the correct product and joint design. While the most critical steps are proper surface preparation and an appropriate application.

1.0 Substrate Preparation

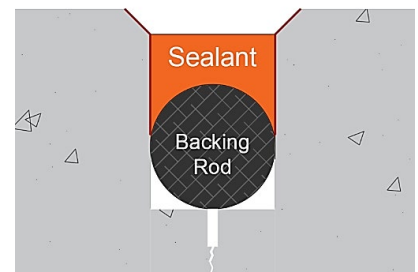
- 1.1 **Flexseal PS700** is suitable for use with concrete and asphalt substrates.
- 1.2 Concrete surfaces must be sound, dimensionally stable, and fully cured (not subject to shrinkage).
- 1.3 Excess laitance, old coating, or surface treatments are best removed by mechanical grinding, light sand/grit blasting followed by vacuum cleaning to remove dust debris. All preparation equipment should be of a type approved by DCP.
- 1.4 Always be sure that the substrates are dry before the application.

2.0 Joint Preparation

- 2.1 All joints to be sealed must be clean, dry, and free from any laitance, wax, grease, dirt, and oil or any contaminations such as release agents, curing compounds, dust, dirt, cavities, projecting nibs, etc.

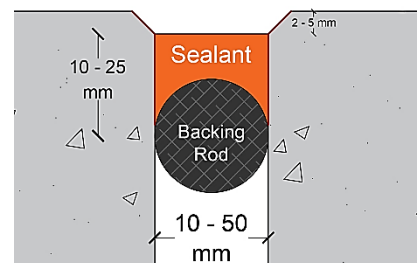


- 2.2 Where joints in the substrate are saw cut. After sawing, all slurry material must be flushed away and joint surfaces allowed to dry.



- 2.3 Joint design

Joint width	Minimum = 10 mm Maximum = 50 mm (in trafficked areas)
Joint depth	Minimum = 10 mm. Maximum = 25 mm
Width: Depth ratio	2:1 (Within above min/max limitations)
Sealant recess	2 – 5 mm
Bevelling /Chamfering	3 to 10 mm width (typically 5 mm) at an angle of approximately 45°



- 2.4 If required, place a backing rod of appropriate size into the joint to the required depth to provide the correct joint depth, support the applied sealant and prevent three-point adhesion.
- 2.5 To ensure that the rod will be able to withstand the sealant; the backing rod size shall be 25% larger in diameter than the joint width, this will also ensure it is held in position in a secure fit and the joint width/depth ratio is maintained.
- 2.6 Care should be taken not to puncture the backing rod during installation as punctures might create bubbling.
- 2.7 Remember to consider both the sealant depth (thickness) and the sealant recess of 2 – 5 mm below the surface when determining the backing rod depth.



3.0 Placing

- 3.1 Priming does not substitute for good preparation.
- 3.2 **Flexprime Universal** must be used for concrete and asphalt substrates in order to enhance the adhesion, achieve optimum bond strength, and reduce the risk of failure, especially when exposed to fuel and oil.
- 3.3 If required, mask and tape the surface of the substrate around the joint edges to protect it from any excess material of sealant, and remove it immediately after applying the sealant.
- 3.4 Prime the sides of the prepared joint using **Flexprime Universal**.



Flexprime Universal method of application.

- Stir **Flexprime Universal** well before use.
- Apply one continuous coat of the primer using a brush or spray to the prepared joint.

Note: avoid any primer ponding on the substrate.

- Apply **Flexseal PS700** while the primer is still tacky to achieve optimum adhesion strength.



4.0 Mixing

Please note that the below-mixing procedure is specifically for air-powered sealant gun and pressure vessels with lance applications. While for the two-component dispensing machine, the mixing is done by the machine.

- 4.1 To ensure proper mixing, a drill fitted with a suitable paddle should be used.
- 4.2 **Flexseal PS700** is supplied in two components, Part A and Part B, with a mixing ratio of 5:1, suitable for two-component dispensing machine application.
- 4.3 The full quantity of the two components must be mixed thoroughly for 3 - 5 minutes until a uniform consistency is achieved.
- 4.4 To ensure thorough mixing pour materials into a clean container and mix again for 1 - 2 minutes to achieve a smooth consistent mix.
- 4.5 Over mixing must be avoided to minimize air entrainment.
- 4.6 Place the mixer as near to the working area as possible.

Notes:

- *Never mix **Flexseal PS700** by hand as this could lead to areas of uncured material.*
- *Ensure that sufficient labor is available to enable continuous mixing and pouring.*
- *Do not mix part of packs under any condition, as this will change the mixing ratio of the product which will affect the material performance.*

5.0 Application

- 5.1 Using a two-component dispensing machine system
 - 5.1.1 **Flexseal PS700** can be applied using a suitable pump system with a 5:1 mixing ratio by volume, contact DCP Technical Department for more information and recommendations for the machines to be used.
 - 5.1.2 Refer to the dispensing machine manufacturer recommendations for application, place the two parts of **Flexseal PS700** in the dispensing machine.
 - 5.1.3 Inject the sealant with a continuous, smooth action starting at the bottom of the joint to the top.
 - 5.1.4 Extrude and dispense firmly into the joint while ensuring complete contact between the applied sealant and joint walls.
 - 5.1.5 Maintain a steady flow of sealant to avoid air entrapment, and avoid overlapping the sealant.
 - 5.1.6 Fill the joints to the lower edge of the bevel.



5.2 Air-powered sealant gun

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



5.3 Pressure vessel with lance

- 5.3.1 The mixed **Flexseal PS700** sealant should be poured into the pressure vessel.
- 5.3.2 Refer to the pressure vessel manufacturer recommendations for application, the outflow can be started and the mixed sealant can be applied into the primed joints.
- 5.3.3 Ensure to apply the sealant with a continuous, smooth action starting at the bottom of the joint to the top.
- 5.3.4 Fill the joints to the lower edge of the bevel maintaining the sealant recessed from the surface of the joint.

Sealant Quantity Estimator

(Linear meter per one liter of Flexseal PS700)

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.

6.0 Tooling and Finishing

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

Notes:

- *If masking tape was used, remove it directly after applying the sealant.*
- *The applied sealant must be left undisturbed until it has sufficiently cured*



7.0 Cleaning

- 7.1 All tools should be cleaned **immediately** after finishing using an appropriate solvent.

8.0 Limitations

- 8.1 Application should not be undertaken if the temperature is below 5°C.
- 8.2 **Flexseal PS700** should be conditioned at $25 \pm 2^\circ\text{C}$ if to be applied using a two-component pump system at higher or lower ambient temperatures.
- 8.3 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.
- 8.4 While mixing and injecting the material, ensure not to incorporate too much air.
- 8.5 If the concrete pavement is to be coated, it is recommended to apply the joint seal first followed by the coating. Ensure that the applied sealant is not coated when applying the floor coating in order to not affect the free operation and movement of the sealant.

9.0 Inspection

- 9.1 Inspection and maintenance must be performed on a regular basis, as defects can occur due to overloading or defects in the bonding surfaces.
- 9.2 Professional inspection and maintenance should be performed at least once a year (or more frequently if the equipment is used frequently), and minor defects must be repaired as required.
- 9.3 For more significant and critical defects, a repair plan must be drawn up.
- 9.4 User inspection of joints must be done on a regular basis to ensure that they are free of sand, stones, glass splinters, and other debris.
- 9.5 **Flexseal PS700** is easily repairable due to the good bond between new material and old material.



Section C: Cautions

Health and safety

Avoid **Flexseal PS700** contact with skin or eyes. In case of accidental contact with eyes, immediately flush with plenty of water for at least 10 minutes and seek medical advice if necessary.

Fire:

Flexseal PS700 is nonflammable.

For further information on refer to the Material Safety Data Sheet.

Section D: Approval and Variations

This method statement is offered by DCP as a 'standard proposal' for the application of **Flexseal PS700**. It remains the responsibility of the Engineer to determine the correct method for any given application. Where alternative methods are to be used, these must be submitted to DCP for approval, in writing, prior to commencement of any work. DCP will not accept responsibility or liability for variations to the above method statement under any other condition.