

Flexseal® PU425

One component, non sag, high modulus elastomeric polyurethane sealant with high tear and weather resistance



DESCRIPTION

Flexseal PU425 is a one component, solvent free, non sag, high modulus polyurethane sealant that cures by reacting with air humidity to form a tough and highly elastic sealant. Flexseal PU425 has a very wide service temperature range. Suitable for vertical and horizontal joints.

APPLICATIONS

- › General sealing of construction and expansion joints.
- › Basement walls.
- › Precast concrete elements.
- › For concrete, wood, marble, stone, aluminum, steel, ceramic, gypsum boards, glass, etc.

ADVANTAGES

- › Very easy and economical to use.
- › One component.
- › Solvent free.
- › Excellent ageing resistance.
- › Paintable, consult DCP Technical Department for more details.
- › Remains elastic at low temperatures.
- › Good resistance to microorganisms and a variety of chemicals.
- › Good adhesion to concrete without the need for priming.

STANDARDS

Flexseal PU425 complies with:

- › ASTM C920, Type S, Grade NS, Class 25, Use NT, T₂, A, G, M and I*.
 - › LEED® EQc 4.1 SCAQMD, Rule 1168.
 - › EN 15651-1:2017 F-EXT-INT-CC, 25 HM and 20 HM.
- * For use I — at normal condition for immersion test on porous substrates.

TECHNICAL PROPERTIES @ 25°C & 50% RH:

Colour:	White, grey, beige
Specific gravity:	1.47 ± 0.05
Shore A hardness:	25 ± 5 @ 48 hr
ASTM C661	40 ± 5 @ 7 days
Service temperature:	-20 up to 70°C
Application temperature:	5 to 50°C
Adhesion in peel:	
ASTM C794	
Concrete	Pass, no adhesion loss
Aluminum	Pass, no adhesion loss
Glass	Pass, no adhesion loss
Tack free time:	1:00 to 2:00 hr @ 23°C & 50% RH
ASTM C679	
Curing rate:	≈ 2.5 mm/day @ 23°C & 50% RH
Elongation at break:	≥ 400% @ 7 days
ASTM D412	
Tensile strength:	≥ 1.7 MPa @ 7 days
ASTM D412	
Tear strength:	7 kn/m @ 7 days
ASTM D624	
Effects of accelerated weathering:	No cracking
ASTM C793	
Effect of heat aging:	Pass @ 70°C
ASTM C1246	
Effects of continuous Immersion:	Pass, Class 2 (on Glass and Aluminum)
ASTM C1247	
After 10 weeks of immersion at 50°C water	
Movement accommodation:	± 25%
ASTM C719	
ISO 9047	
Elastic recovery:	> 80%
ISO 7389	
Loss of volume:	< 10%
ISO 10563	



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METHOD OF USE

SURFACE PREPARATION

All substrates should be clean, dry, free from dust, oil, grease and any contaminations that could effect the adhesion.

If the substrates need to be cleaned, use methyl ethyl ketone (MEK) or acetone. Always be sure that the substrates are dry before the application.

PRIMING

- » Flexseal PU425 generally has strong adhesion to common clean, dry and sound substrates without primers. However, for stronger adhesion, Strongcoat Primer or Flexprime Universal can be used on porous and nonporous surfaces in order to achieve optimum adhesion strength.
- » For joints which will be continuously submerged in water, Flexprime Universal or Strongcoat DPM should be used. Consult DCP Technical Department for best primer suggestions.
- » Using a small brush apply one thin coat at the joint sides and avoid over priming. Apply Flexseal PU425 over the primed surface after 12 - 24 hours to achieve optimum adhesion strength.

APPLICATION

The recommended application temperature range is 5°C to 50°C. For cold weather application, store the product in a heated area at 20°C for 24 hours prior to use. Install polyethylene joint backing rod to control the sealant depth.

For optimum performance in expansion joints, the ratio of width to depth of the sealant should be 2:1. Minimum sealant depth should however be 6 mm.

For optimum performance, Flexseal PU425 should be applied when the joint is at mid-point of its designed expansion and contraction.

TECHNICAL PROPERTIES @ 25°C & 50% RH:

Skin time:	30 - 50 min @ 23°C & 50% RH
Tooling time:	20 min @ 23°C & 50% RH
VOC: ASTM D2369	≤ 10 g/ltr (comply with LEED)

For cartridge application:

- » Use a utility knife to cut/trim the nozzle cap diagonally so that it fits the joint width.
- » Open the tip of the cartridge by using a pin to cut the seal (Caulking guns usually have a pin tool to be used).
- » Place Flexseal PU425 cartridge into the cartridge gun.
- » Press the tip of the gun firmly towards the point of application and pull the trigger to release the sealant.

For sausage application:

- » Place Flexseal PU425 sausage inside the caulking gun barrel.
- » Use scissors or utility knife to cut the clip off the sausage while still in the gun.
- » Cut/trim the nozzle cap diagonally so that it fits the joint width.
- » Extrude Flexseal PU425 by squeezing the large trigger.
- » To replace the sausage, simply unscrew the end cap, dispose of the used pack, and load in the new sausage.

Extrude and dispense firmly into the joint while ensuring complete contact between the applied sealant and joint walls. Maintain a steady flow of sealant to avoid air entrapment, and avoid overlapping the sealant. Tooling and finishing should be carried out immediately after the application of the sealant.

LIMITATIONS

- » Not recommended for unsound substrates.
- » Although Flexseal PU425 is generally paintable, it is advisable test for the specific paint for compatibility.
- » Long exposure to UV, will reduce surface gloss, but will not affect sealant performance.
- » For lower thicknesses, tool immediately.
- » Not recommended for use on bituminous substrates, natural rubber, or materials that may bleed oils, plasticizers, or solvents, as these may adversely affect sealant performance
- » Compatibility with EPDM, rubber, or similar gaskets in direct contact with the sealant should be confirmed by preliminary testing prior to application.
- » Adhesion to plastics may vary depending on type and surface condition; preliminary testing is recommended.
- » Lower temperatures and humidity levels will extend skin time and final cure time.

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CLEANING

Clean tools and equipment first with paper towels and then wipe with Acetone, xylene or other suitable solvents.

PACKAGING

Flexseal PU425 is available in 600 ml sausages. 300 ml sausages and 300 ml cartridges are available on request.

CONSUMPTION IN JOINTS

(Linear metre per 600 ml sausage)

Width \ Depth	6 mm	10 mm	15 mm	20 mm	25 mm	35 mm
6 mm	16.6	10				
7.5 mm			5.3	4.0		
10 mm				3.0	2.4	
15 mm					1.6	1.1

STORAGE

Flexseal PU425 should be stored in original unopened packages at temperature of 4°C - 30°C in a dry place.

SHELF LIFE

Flexseal PU425 has a shelf life of 12 months from date of manufacture if stored under the recommended conditions.

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

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CAUTIONS

HEALTH AND SAFETY

If Flexseal PU425 comes into contact with the eyes, flush with copious amounts of cold water and obtain medical attention.

Product is non-hazardous once cured.

For further information refer to the Safety Data sheet.

MORE FROM DON CONSTRUCTION PRODUCTS

A wide range of construction chemical products are manufactured by DCP which include:

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

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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.

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