

Flexseal PU650

High-movement, high-performance, one component, non-sag polyurethane sealant



Description

Flexseal PU650 is a one component, non-sag polyurethane sealant that cures by reacting with air humidity to form a high-performance and highly elastic low modulus sealant capable of cyclic expansion and compression movement of ($\pm 50\%$) of the original joint width.

Flexseal PU650 has a very wide service temperature range. Suitable for vertical and horizontal joints.

Applications

- ▲ Sealing of expansion and construction joints.
- ▲ Precast concrete elements.
- ▲ For concrete, wood, marble, stone, aluminum, steel, ceramic, gypsum boards, etc.

Advantages

- ▲ High movement capability of $\pm 50\%$.
- ▲ One component.
- ▲ Excellent weathering and aging resistance.
- ▲ Paintable.
- ▲ Remains elastic at temperatures down to -40°C .
- ▲ Good adhesion to most surfaces without need for priming.
- ▲ Good resistance to microorganisms and a variety of chemicals.

Standards

Flexseal PU650 complies with:

- ▲ ASTM C920, Type S, Grade NS, Class 50, Use NT, T_1 , A, M and I.
- ▲ ISO 11600, Type F, Class 25 LM.

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), acetone or grease remover. Always be sure that the substrates are dry before the application.

Technical Properties:

Colour:	Various
Density:	$1.15 \pm 0.05 \text{ g/cm}^3$
Shore A hardness: ASTM D2240	25 ± 5
Service temperature: Shock temperature:	-40 up to 100°C 120°C
Application temperature:	5 up to 50°C
Curing rate:	$2.5 - 3.5 \text{ mm/day}$
Skin time:	$1 - 2 \text{ hr}$
Tack free time: ASTM C679	$1 - 3 \text{ hr @ } 22^{\circ}\text{C \& } 55\% \text{ RH}$
Elongation at break: ASTM D412	$> 750\%$
Tensile strength: ASTM D412	$> 1.7 \text{ MPa}$
Movement accommodation factor: ASTM C719	± 50
Adhesion in peel: ASTM C794 (mortar)	$> 110 \text{ N}$
Effects of accelerated weathering: ASTM C793	Pass
Stain an colour change: ASTM C510	Pass
Tear propagation resistance: ASTM D624 (die C)	$> 6.5 \text{ MPa}$
Modulus @ 60% : ISO 8339	0.15 MPa

Priming

- ▲ Flexseal PU650 generally has strong adhesion to common clean, dry and sound substrates without primers. However, Flexprime PS100 primer can be used on porous substrates in order to achieve optimum bond strength.

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- ▲ For joints of porous substrates which will be continuously submerged in water, it is recommended to use Flexprime PS100.
- ▲ Apply Flexseal PU650 within 10 - 30 minutes from the application of Flexprime PS100 at 23°C.

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.

Tooling and finishing should be carried out immediately after the application of the sealant. For optimum performance, the ratio of width to depth of the sealant should be 2:1. Minimum sealant depth should however be 5 mm.

Limitations

- ▲ Not recommended for unsound substrates.
- ▲ Although Flexseal PU650 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.

Cleaning

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

Packaging

Flexseal PU650 is available in 600 ml sausages.

Consumption in joints

(Linear metre per 600 ml sausage)

Width \ Depth	5 mm	10 mm	15 mm	20 mm	25 mm	50 mm
5 mm	22	11				
10 mm			3.6	2.7	2.2	
15 mm					1.5	
20 mm						0.57
25 mm						0.46

Storage

Flexseal PU650 should be stored in original unopened packages at temperatures between 5°C and 25°C in a dry place.

Shelf Life

Flexseal PU650 has a shelf life of 12 months from date of manufacture if stored under the recommended conditions.

If these conditions are exceeded, DCP Technical Department should be contacted for advice.

Cautions

Health and Safety

If Flexseal PU650 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.

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- ▲ Concrete repair.
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- ▲ Adhesives.
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- ▲ Structural strengthening.

Note:

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