

Ultra Seal PU 500

One component, non-sag, elastomeric polyurethane sealant

Product Description

Ultra Seal PU 500 is a one-component, non-sag, polyurethane-based sealant that cures by reacting with air humidity to form a tough and highly elastic low-modulus sealant with a high tear and wear resistance.

Ultra Seal PU 500 is suitable for vertical and horizontal joints, with a wide service temperature range.

Applications and Key Functions

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

Features and Advantages

- One component.
- Excellent adhesion to a wide range of substrates without the need for priming.
- High elasticity and suitable for joints of great mobility.
- Excellent water resistance.
- Suitable for a wide temperature range.
- Very easy and economical to use.
- Excellent aging resistance.
- Paintable, with the usual construction paints.
- Remains elastic at temperatures down to -30°C.
- Good resistance to microorganisms and a variety of chemicals.

Standards

Ultra Seal PU 500 complies with:

- ISO 11600, Type F, Class 25 LM.
- ASTM C920, Type S, Grade NS, Class 25, Use NT, T1, A, M and I.

Product Performance Properties

Type	One-component, polyurethane-based sealant
Color	Various
Consistency	Non-sag
Density	1.18 g/cm ³ approx.
Tack free time (ASTM C679)	1:00 to 3:30 hours @ 23 C, and 50% RH
Elongation at break (ASTM D412)	≥ 800 % @ 7 days
Tensile Strength (ASTM D412)	≥ 1.8 MPa @ 7 days
Adhesion in peel (ASTM C794)	≥ 110 N
Curing rate	≈ 2.5 – 3.5 mm/day
Movement accommodation (ASTM C719)	± 25 %
Application Temperature	5 up to 50 C
Service temperature	-30 up to 90 C
Shore A hardness (ASTM C661)	25± 5 @ 7 days
Effect of heat aging (ASTM C1246)	Pass @ 70 C
Effect of accelerated weathering (ASTM C793)	No cracking
VOC (ASTM D2369)	≤ 75 g/ltr (comply with LEED)

Application Instructions

Surface Preparation

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

Priming

Ultra Seal PU 500 generally has strong adhesion to common clean, dry, and sound substrates without primers. However, suitable primers can be used on porous and non-porous surfaces to achieve optimum adhesion strength.

For joints that will be continuously submerged in water, suitable primers should be used.

Using a small brush apply one thin coat at the joint sides and avoid over priming.

Apply Ultra Seal PU 500 sealant while the primer is still tacky to achieve optimum adhesion strength.

Application

The recommended application temperature range is 5oC to 50oC.

For cold weather applications, store the product in a heated area at 20 C for 24 hours before use.

Install a 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 Ultra Seal PU 500 is generally paintable, it is advisable to 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

Ultra Seal PU 500 is available in 600 ml sausages.

Storage

Ultra Seal PU 500 should be stored in original unopened packages at a temperature of 5 C – 25 C in a dry place.

Shelf Life

Ultra Seal PU 500 has a shelf life of 8 months from the date of manufacturing if stored under the recommended conditions.

Storing the material at temperatures higher than 25 C will shorten the shelf life of the product.

Health and Safety

If Ultra Seal PU 500 comes into contact with the eyes, flush with copious amounts of cold water and obtain medical attention.

The product is non-hazardous once cured.

Consumption in Joints

(Linear meter per 600 ml sausage)

Depth	Width	5 mm	10 mm	15 mm	20 mm	25 mm	35 mm
5 mm		22	11				
7.5 mm				4.9	3.4		
10 mm					2.8	2.2	
15 mm						1.5	1.0

Additional White Sand Products

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- Adhesives and Tiling Systems.
- Surface Treatments and Primers.
- Concrete Repairs and Grouts.
- Waterproofing Systems.
- Finishing Systems.
- Flooring Systems.
- Plasters and Renders.
- Cement Modifiers and Mortar Admixtures.
- Protective Coatings and Linings.

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