

J-SEAL® PU1 POLYURETHANE JOINT SEALANT



PRODUCT DESCRIPTION

J-Seal® PU1 is a one-component, gun grade, polyurethane joint sealant with high bond strength, which cures on absorption of atmospheric moisture to form a firm and flexible seal for moderate movement joints, construction joints and control joints in concrete and masonry structures. J-Seal® PU1 can be used in both horizontal and vertical applications.



ADVANTAGES

- Fast cure, easy to apply, one component sealant. No mixing required
- High strength performance with excellent elasticity and flexibility
- Superior weatherability and no discolouration
- Highly resilient with excellent recovery characteristics
- Trafficable - Footpaths, stairs, pavements and floor slabs
- Movement capability : 100% extension and 50% compression
- Joint application width : 50mm maximum
- Excellent adhesion to most building substrates
- Stainability - Non-staining to most types of substrates
- Low Volatile Organic Compound (VOC)
- Able to be painted over by most types of paints, after one day of application
- Tested and conforms to ASTM C-920 : 2018 standard specification for elastomeric joint sealants



AREAS OF APPLICATION

- Construction and expansion joints in concrete slabs and walls
- Precast concrete joints
- Brick and masonry expansion joints
- Perimeter caulking (windows, doors, aluminium frames)
- Structural glazing & curtain wall joints
- Parapet wall joints, floor and pavement joints
- Repairing of concrete cracks (refer to minimum joint width requirements)
- Bathroom and kitchen installations

Note : The product's design and performance, its intended use, installation and final confirmation and approval for use, must be provided by the project's Design Engineer and Project Manager.



PHYSICAL PROPERTIES

PROPERTY	RESULT
Appearance	Paste
Colour	Grey as standard. Also available in light grey, black and white
Viscosity (rotor no.7, 10rpm) (28±2°C)	250,000 - 450,000 cps
Specific gravity (28 ± 2°C)	1.40 - 1.50
Tack free time (28 ± 2°C)	60 ± 15 minutes
Application temperature (°C)	+5 to +40
Service temperature (°C)	-30 to +90
Full cure time (28 ± 2°C)	7 days. Up to 14 days for joint widths > 20mm
Chemical Resistance	Hydraulic Oil
Cure Method	Air moisture curing

PROPERTY	METHOD	RESULT
Staining & Colour Change	ASTM C510	No visible staining & no colour change
Indentation Hardness	ASTM C661	22
Effect of heat aging on weight loss, cracking & chalking	ASTM C1246	< 7% No cracking & chalking
Adhesion & cohesion under cyclic movement	ASTM C719	No bond failure @ +100/-50% movement capability
Effects of accelerated weathering	ASTM C793	No cracks
Adhesion-in-peel	ASTM C794	154.4 N (Average) 0%
Tensile Strength	ASTM D412	1.47 N/mm ²
Elongation at break	ASTM D412	674%

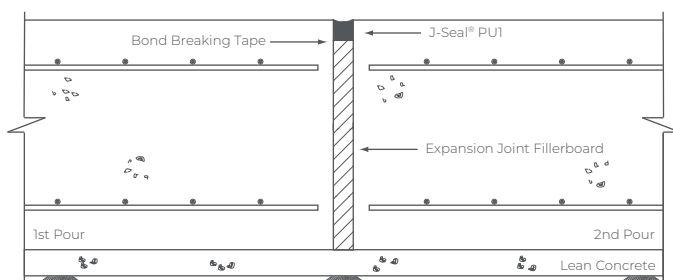
Classification: Standard Specification For Elastomeric Joint Sealants (ASTM C920 : 2018)

Type :	S (Single component)
Grade :	NS (Non-SAG)
Movement capability :	Class 100/50 (100% Extension (Elongation) & 50% Compression)
Use :	T ² (Traffic)

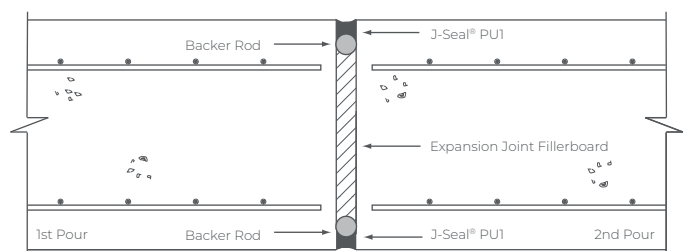
Note: The above physical properties are test results from an independent laboratory test report and a copy is available upon request. Material properties can vary between batches of ± 10%.



TYPICAL APPLICATIONS



SLAB ON GROUND APPLICATION



WALL APPLICATION





JOINT DESIGN GEOMETRY

The width of the joint should be a minimum of 4 times the anticipated movement but within the maximum width requirements. Joints with cyclic movement should have a width to depth ratio of **2:1** and **1:1** for static joints. The joint depth shall not exceed the width.

The joint width and depth should be maintained as suggested:

JOINT WIDTH

- 5 mm (Minimum)
- 50 mm (Maximum)

JOINT DEPTH

- 5 mm (Minimum)
- 25 mm (Maximum)

Note: Wider joint widths may be applicable but check with **CORKJOINT** for verification.
Final joint sizes/geometry should be verified and approved by the Project's Design Engineer.



COVERAGE

Length of joints in meters filled per 600 ml sausage of **J-Seal® PU1** -

DEPTH (mm)	WIDTH (mm)				
	5	10	15	20	25
5	24	12	8	-	-
10	-	6	4	3	-
15	-	-	2.67	2	1.6
20	-	-	-	1.5	1.2
25	-	-	-	-	0.96

Note: Calculation based on theoretical coverage. Actual material consumption at site will vary depending upon final joint size and wastage etc.



APPLICATION PROCEDURES

J-Seal® PU1 is available in a ready to use self-contained sausage which can be loaded into a barrel gun. Start extruding the sealant into the joint firmly by maintaining an even pressure on the trigger of the gun. On vertical joints, sealant extrusion shall start from the bottom of the joint and continue to the top. Once the sealant has been installed, a suitable rounded tool can be used to achieve a smooth concave profile. **DO NOT USE SOAPY WATER SOLUTION TO SMOOTHEN THE SURFACE.** Any masking tape applied should be removed immediately after the sealant has been applied.



LIMITATIONS

J-Seal® PU1 is not recommended for:

- Overhead joints
- Movement joints having Movement Accomodation Factor (MAF) > 50%
- Damp and contaminated surfaces
- Asphalt pavements or any material containing bitumen
- Over painting with enamel or rigid paints (paint compatibility with sealant shall be checked prior to painting)
- External application in white/off white will result in yellowing on exposure to UV
- Use in chlorinated water such as swimming pools & spas
- Immersion in water and salt water
- Applied in joints wider than 50mm
- Applied in joints less than 5mm in width and depth
- Use for glazing applications
- High and/or sharp point loads





INSTALLATION PROCEDURES

JOINT PREPARATION

The joint edges must be clean, dry and free from oil, loose particles, cement laitance and other contaminants, which may affect the adhesion. A thorough wire brushing, grinding, sand blasting or solvent cleaning, may be required to expose a clean and sound substrate. When applied on glazed surfaces like ceramic or terrazzo tiles or porcelain enamel joint surfaces, the glaze should be removed by abrading with sandpaper or wire brush.

PRIMING

After preparing the surface as above and making sure the surface is dry, for concrete and masonry surfaces, apply one layer of J-Seal® Primer N49 on each side of the joint receiving the sealant. When applying on aluminium and metal surfaces, ensure the surface is cleaned of all lacquer or protective coatings. Metal, galvanized, copper and stainless-steel surfaces shall be primed with J-Seal® Primer N40. The primer shall be applied by a brush in a thin coat application and shall be allowed to become tack free prior to the application of the sealant. For obtaining a clean and neat finish, masking tape should be applied on both edges of the joint before the application of the primer or the sealant and shall be removed once the sealant installation is complete.

NOTE: Primer is recommended as an additional item to benefit the adhesion of the joint sealant. If the joint and concrete surface, where the joint sealant is being applied, is prepared in accordance to the "Joint Preparation" requirements as stated above, then the use of the primer is not necessary, as the joint sealant is able to bond directly to the concrete.

BACKING MATERIAL

A bond breaking backing rod shall be inserted into all movement joints to avoid three-sided adhesion or bond breaking tape may be applied to joints where the depth does not allow the application of the backing rod. If the fillerboard is closed-cell polyethylene then no backing material is required as the sealant will not bond to the surface of the fillerboard.

Note: Joint sealant can only be applied for use on concrete or cement after 28 days of curing of the substrate.



PACKAGING AND SUPPLY

J-Seal® PU1	600ml (20 sausage/carton)
J-Seal® N49 Primer	1ℓ pail
J-Seal® N40 Primer	1ℓ pail
Ancillaries & Equipment	Jointflex® Backer Rod (Closed Cell Polyethylene) Sealant Barrel Gun



STORAGE & SHELF LIFE

Store in a cool (at 5°C to 25°C), dry place and keep away from all sources of heat and sunlight. In tropical or hot climates, store in air-conditioned rooms. The shelf life is up to 12 months from date of manufacture, in un-opened condition and if stored as per recommendations. Excessive exposure to sunlight, heat and humidity, will result in the deterioration of the quality of the product and reduce its shelf life.



CLEANING

Remove all excess sealant with a scraper. Any spillage can be cleaned using solvent or xylene. Clean all tools and equipment using similar solvents immediately after the tooling. Hardened materials can be removed mechanically only.





WRITTEN SPECIFICATION

Where shown in the drawings, the joint sealant shall be **J-Seal® PU1** polyurethane joint sealant as supplied by **CORKJOINT**. The application/installation of the product must be in accordance with the manufacturer's recommendations and **J-Seal® PU1** Primer must be used in conjunction with the application of the joint sealant.



HEALTH AND SAFETY INFORMATION

Do not apply primer near smoke or naked flame. In case of fire, extinguish with carbon dioxide, dry chemical or foam fire extinguisher.

As with all construction chemical products caution should be exercised. Protective clothing such as gloves and goggles should be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

In confined spaces or in still air conditions, the use of a ventilation fan or suitable respirator should be used, and the advice and approval of the Site Safety Supervisor is essential. For further information or advice on health and safety precautions, safe handling, storage and correct disposal of products, please refer to the most recent product Safety Data Sheet (SDS), which is available upon request.



DISCLAIMER

The information and the recommendations relating to the application and end use of this product are given in good faith and are based on the information provided by the manufacturer of the product and/or the Company's current knowledge and experience in connection with the product when properly stored, handled and applied under normal conditions and no liability of final function at the job site is assumed. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability of, or fitness for, particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written and/or oral recommendations, or from any other advice offered by the Company. The Company also has no express or implied knowledge of any particular purpose for which the product is required and any such information given will not be taken into account in the supply of this product. No responsibility or liability by the Company will be accepted for misuse, misreading or derivation from recommended guidelines in respect of this product and the user shall determine the suitability of the product for his intended use and assume all risks and liability in connection therewith. The information contained in our brochure may change at any time without notice. Any use of this product, **J-Seal® PU1**, in any application should be approved as suitable for use/application by the Design Engineer and Project Manager.

Effective Date: 29 JULY 2022

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