

KingSeal® PU1

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

DESCRIPTION

KingSeal PU1 is a one component non sag polyurethane sealant that cures by reacting with air humidity to form a tough and highly elastic low modulus sealant. KingSeal PU1 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, etc.

ADVANTAGES

- ☐ Very easy and economical to use.
- ☐ One component.
- ☐ Excellent ageing resistance.
- ☐ Paintable, consult KINGKRETE's Technical Department for more details.
- ☐ Remains elastic at temperatures down to -30°C.
- ☐ Good resistance to microorganisms and a variety of chemicals.
- ☐ Good adhesion to most surfaces without the need for priming.
- ☐ Excellent water resistance.

STANDARDS

KingSeal PU1 complies with:

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

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.

| | |
|---|---|
| Colour: | Various |
| Density: | 1.15 ± 0.03 g/cm ³ |
| Shore A Hardness: ASTM D2240 | 30 ± 5 @ 7 days |
| Service temperature: | -30 up to 80°C |
| Application temperature: | 5 up to 50°C |
| Adhesion in peel: ASTM C794 | ≥ 110 N |
| Tack free time: ASTM C679 | 1:00 to 3:30 hr @ 23°C & 50% RH |
| Curing rate: | ≈ 2.5 - 3.5 mm/day |
| Elongation at break: ASTM D412 | ≥ 800% @ 7 days |
| Tensile strength: ASTM D412 | ≥ 1.8 MPa @ 7 days |
| Modulus @ 60%: ISO 8339 | ≤ 0.25 MPa @ 23oC (LM) ≤ 0.40 MPa @ -20°C (LM) |
| Effects of accelerated weathering: ASTM C793 | No cracking |
| Effect of heat aging: ASTM C1246 | Pass @ 70°C |
| Movement accommodation: ASTM C719 | ± 25% |
| VOC: ASTM D2369 | ≤ 75 g/ltr (Comply with LEED) |

Priming

- ☐ KingSeal PU1 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.
- ☐ For joints of porous substrates which will be continuously submerged in water, it is recommended to use Flexprime PS100.
- ☐ Apply KingSeal PU1 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.

TECHNICAL PROPERTIES

LIMITATIONS

KingSeal® PU1

- ⓘ Not recommended for unsound substrates.
- ⓘ Although KingSeal PU1 is generally paintable, it is advisable to test 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

KingSeal PU1 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 | 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 |

STORAGE

Shelf life is 1 year when stored under cover, out of direct sunlight and protected from extremes of temperature.

Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice consult KingKrete's Technical Services Department.

HEALTH AND SAFETY

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs. Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Reseal containers after use. Use in well ventilated areas and avoid inhalation.

NOTE

Field service, where provided, does not constitute supervisory responsibility. For additional information contact your local KingKrete representative.

KingKrete Inc. reserves the right to have the true cause of any difficulty determined by accepted test methods.

QUALITY AND CARE

All products originating from KingKrete's manufacturing facilities are manufactured under a management system independently certified to conform to the requirements of the quality standard ISO 9001.

* Properties listed are based on laboratory-controlled tests.

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STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this KingKrete Inc. publication are based on the present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use.

NOTE

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