

# KingSeal® PU165

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

## DESCRIPTION

KingSeal PU165 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.

KingSeal PU165 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  $-40^{\circ}\text{C}$ .
- ☒ Good adhesion to most surfaces without need for priming.
- ☒ Good resistance to microorganisms and a variety of chemicals.

## STANDARDS

KingSeal PU165 complies with:

- ☒ ASTM C920, Type S, Grade NS, Class 50, Use NT, T1, 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	$25 \pm 5$
Service temperature:	$-40$ up to $100^{\circ}\text{C}$
Shock temperature:	$120^{\circ}\text{C}$
Application temperature:	5 up to $50^{\circ}\text{C}$
Skin time:	1 - 2 hr
Tack free time: ASTM C679	1 - 3 hr @ $22^{\circ}\text{C}$ & 55% RH
Curing rate:	$\approx 2.5 - 3.5 \text{ mm/day}$
Elongation at break: ASTM D412	$> 750\%$
Tensile strength: ASTM D412	$> 1.7 \text{ MPa}$
Movement accommodation factor: ASTM C719	$\pm 50$
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	$0.15 \text{ MPa}$

## PRIMING

- ☒ KingSeal PU165 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 PU165 within 10 - 30 minutes from the application of Flexprime PS100 at  $23^{\circ}\text{C}$ .

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## 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 KingSeal PU165 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

KingSeal PU165 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

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 Middle East facility are manufactured under a management system independently certified to conform to the requirements of the quality standards ISO 9001, ISO 14001 and ISO 45001.

\* Properties listed are based on laboratory-controlled tests.

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## STATEMENT OF RESPONSIBILITY

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## NOTE

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