

Polycraft K2

Fast Cast Polyurethane System
Unfilled, 100 : 100 Mixing Ratio

Polycraft K2 is a fast curing polyurethane casting system designed for high strength applications. The low colour system allows for easy pigmentation. Polycraft K2 can be filled with mineral or metallic fillers for reduced shrinkage.

Special Features

- Excellent physical properties
- Easy to pigment
- Low viscosity

Mix Ratio

K2 Part A : K2 Part B
By Weight 100 : 100

Product Data

Property	Units	K2 - A	K2 - B	Mix
Material	-	Polyol	Isocyanate	Polyurethane
Appearance	-	Cream liquid	Straw coloured Liquid	Cream liquid
Viscosity (25°C)	mPa.s	200 –300	200 –400	200 –400
Density (25°C)	g/cm ³	1.00 –1.05	1.18 –1.23	1.09 –1.14
Pot life (200g, 25°C)	Seconds	-	-	6 min – 6 min 30
Demould Time (50g, 10mm, 25°C)	Minutes	-	-	30 –40
Maximum Recommended Thickness	mm	-	-	25

Technical Data Sheet

Cured Properties

Properties	Standard	Units	Result (Full Post Cure)
Hardness	BS EN ISO 868	Shore D	82 –86
Tensile Strength	BS EN ISO 527	MPa	65 –70
Tensile Modulus	BS EN ISO 527	MPa	1850 –2150
Elongation at Break	BS EN ISO 527	%	4.5 –5.0
Flexural Strength	BS EN ISO 178	MPa	100 –105
Flexural Modulus	BS EN ISO 178	MPa	2250 –2550
Glass Transition Temperature (Tg)	DMA	°C	68 –73

Method of Use

Mould Preparation

Ensure that the mould is clean and dry. If the mould is made from wood, metal or resin, use a release agent such as macwax. If the mould is made from wood, ensure the wood is well sealed with varnish and/or wax based release agents such as macwax. Never use silicone release agents if the units are to be painted.

Resin Preparation

Shake the Part A can thoroughly in order to homogenise the resin. For best results, make sure the two components are at least 20°C before mixing.

Mixing Instructions

When using unfilled, add the correct amount of Part B to the Part A and stir for 30 seconds. Pour carefully in one place into the mould in order to avoid air inclusion.

If using filled, we recommend the use up to 150% filler. Use Alumina Trihydrate for general bulking out and shrinkage reduction, or Aluminium Powder for higher temperature applications. Large quantities of material, filled or unfilled, will always produce more exotherm and will gel quicker than smaller amounts.

If aiming to use 150% filler in a 200g mix, weigh out 100g of part A and mix in 150g filler. Then weigh out 100g of B and mix in 150g filler. Then mix the two components.

Curing

The casting can generally be demoulded in 30 –40 minutes at room temperature. The precise demould time will vary with casting thickness, as thin section units will cure slower than thicker section units. When casting thin wall sections, ensure that the mould and resins are at least 20 –25°C to facilitate a good cure and reduce the risk of brittleness. The product is designed to be used at room temperature, but a post cure may improve the properties of the final product. A typical post cure schedule would be 3 hours at 80°C.

Storage

Polycraft K2 Part A and B should be stored in original, unopened containers between 20 and 25°C. Polycraft K2 Part B may crystallise partially or completely if not stored at above 20°C. Like all polyurethanes, both components are moisture sensitive. Moisture absorption will cause excessive aeration in cast parts. KEEP THE PACKING TIGHTLY SEALED WHEN NOT IN USE.

If stored under the above conditions, Polycraft K2 Part A and B will have a shelf life of 6 months, from the date of production.

Further Information

This data is not to be used for specifications. Values listed are for typical properties and should not be considered minimum or maximum.

Our technical advice, whether verbal, or in writing is given in good faith, but without warranty –this also applies where proprietary rights of third parties are involved. It does not release you from the obligation to test the products supplied by us as to their suitability for the intended process and use.

Before using any of our products, users should familiarise themselves with the relevant Technical and SDS provided.