



PRODUCT INFORMATION

ULTIFIL 3000-030

2 PART POLYURETHANE
RIGID
BLACK
LOW VISCOSITY
CLASS B

ULTIFIL 3000-030 POLYURETHANE INFILL COMPOUND

GENERAL DESCRIPTION

Ultifil 3000-030 is a black, rigid two-part polyurethane infill compound. The system has a low viscosity and is easily processed. Ideal for applications where a high degree of mechanical strength, or machinable capabilities are required. The resin exhibits excellent adhesion to cases and minimum pressure on inserts, together with excellent moisture resistance, electrical and mechanical properties.

APPLICATION

For the encapsulation, sealing and potting of electronic and electrical components where high mechanical strength is required.

SPECIFICATION

PROPERTIES OF THE BASE -

Viscosity @ 25°C	poise	45 - 55
Specific gravity		1.39 - 1.44
Appearance		Black.

PROPERTIES OF THE HARDENER -

Viscosity @ 25°C	poise	1 - 2
Specific gravity		1.20 - 1.26
Appearance		Brown.

PROPERTIES OF THE MIXTURE -

Mix ratio base: hardener		2:1 pbw 1.73:1 pbv
Viscosity @ 25°C	poise	18 - 22
Specific gravity		1.32 - 1.38
Usable life 500 grams mass		5 mins at room temp.

NOTE: Due to the introduction of improvements from time to time the right is reserved to supply products that may differ slightly from those illustrated or described in this publication.

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WORKSHOP PRACTICE

Most problems occur with 2 part systems due to the failure to mix correctly. The following procedure is recommended:

Stir the base component prior to mixing to ensure any settled filler is included. The stirring process should scrape the bottom and the sides of the container and be sufficient to ensure there are no dead areas of unmixed material but should also be a relatively slow process stirring a horizontal circular motion so that minimal air is included into the mix. If time permits this initial stir is made easier if the base component only is heated to 30-40°C and stirred some hour before the 2 components are mixed. Use of still warm base component will reduce the usable life of the mixture. The base and hardener can be measured out by weight, volume or by using all of the pre-weighed kit, but it should be noted the usable life of the mixture decreases as the weight of the mix increases. Ensure the base and hardener are mixed thoroughly using the scraping minimal air inclusion method described previously. This mixing process can take up to 4-5minutes, and it is recommended that, if the usable life allows, extra time is spent mixing at this stage where failure to mix is most frequent.

Water contamination of components, cases or the compound will cause problems of foaming on potted components. When using polyurethane compounds WATER CONTAMINATION SHOULD BE AVOIDED.

CURE SCHEDULE

500 grams mass hard	3 hrs at room temp.
full	48 hrs at room temp.



TECHNICAL BULLETIN
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PROPERTIES OF CURED COMPOUND

Shore D hardness	DIN 53505	87	
Tensile strength	ISO527	45	mPa
Elongation at break	ISO527	2%	
Deflection temperature	DIN 53458	70	°C
Thermal Conductivity	ISO 8894-1	0.25	W/M/K
Coefficient of linear thermal expansion	DIN 53752	65	$\times 10^{-6}K^{-1}$
Water absorption	ISO 62	0.13%	
Dielectric strength	IEC 243	192	Kv/cm.
Dielectric constant	IEC 250	4.1	50Hz
Dissipation factor	IEC 250	0.02	50Hz
Volume resistivity Log10 ohm	IEC 93	>14	Ω/cm
Tracking index	IEC112	>600	V

STORAGE

Between 5°C and 30°C in sealed containers. Avoid contamination with moisture. Shelf life 6 months.

PACKAGING

27 kg kegs.

5 kg kits.

HEALTH & SAFETY

See relevant Material Safety Data Sheet.

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