



PRODUCT INFORMATION

ULTIFIL 3000-060XT

2 PART POLYURETHANE
RESILIENT
BLACK
HIGH THERMAL CONDUCTIVITY

ULTIFIL 3000-060XT

GENERAL DESCRIPTION

Ultifil 3000-060XT is a black, resilient 2 part cost effective polyurethane infill compound. The system has a medium viscosity and is easily processed. The system has a short cure cycle and is suitable for applications where dispensing machines are being used. The cured resin exhibits good adhesion to cases and minimum pressure on inserts, together with good moisture resistance, electrical and mechanical properties. The product has a high thermal conductivity, which allows excellent heat dissipation from working components.

APPLICATION

For the encapsulation, sealing and potting of electronic and electrical components.

SPECIFICATION

PROPERTIES OF THE BASE -

Viscosity @ 25°C	poise	160 - 200
Specific gravity		1.98-2.02
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		8.13:1 pbw
		5:1 pbv
Viscosity @ 25°C	poise	65 - 95
Specific gravity		1.85 - 1.89
Usable life 500 grams mass		10 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. Where plastic lined returnable kegs are being used the stirring process should be restricted so as to not puncture the plastic bag. If time permits this initial stir is made easier if the base component only is heated to 30-40°C and stirred some hours before the 2 components are mixed. Use of still warm base component will reduce the usable life of the mixture.

This system is best mixed through a suitable mixing machine, but it can be mixed by hand. For hand mixing the components should be measured out by weight or volume, but it should be noted the usable life of the mixture decreases as the weight of the mix increases.

When hand mixing warming the base to 25-30°C will make the process easier although allowance must then be made for a slight shortening of usable life.

Mixing the base and hardener thoroughly can take up to 4-5 minutes. This leaves little time to pour the reacting mixture into moulds, it is therefore recommended sufficiently small allocates are mixed so the high wastage is avoided.

Water contamination of components, cases or the compound will cause problems of Afoaming \cong 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	72	
Tensile strength	ISO527	13	mPa
Elongation at break	ISO527	35%	
Deflection temperature	DIN 53458	32	°C
Thermal Conductivity	ISO 8894-1	1.02	W/M/K
Coefficient of linear thermal expansion	DIN 53752	90	$\times 10^{-6}K^{-1}$
Water absorption	ISO 62	0.24	%
Dielectric strength	IEC 243	155	kV/cm.
Dielectric constant	IEC 250	5.4	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 12 months.

HEALTH & SAFETY

See relevant Material Safety Data Sheet.

PACKAGING

9.13 kg Kits

9 x 27.8 kg base and 1 x 30.75 kg hardener

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