



TECHNICAL BULLETIN
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PRODUCT INFORMATION

ULTIMEG 2004B

2 PART EPOXIDE

BLACK

LOW VISCOSITY

THERMAL SHOCK RESISTANCE

EXCELLENT SURFACE APPEARANCE

ULTIMEG 2004 BLACK TWO PART EPOXIDE INFILL COMPOUND

GENERAL DESCRIPTION

Ultimeg 2004B is black, high gloss, low profile, two component epoxide resin system. The product features room temperature processing, non-blushing characteristics, excellent self-levelling and an aesthetically pleasing surface finish. 2004B is a material that is thermally shock resistant has good resistance to most chemical and moisture, together with superior mechanical and electrical properties.

APPLICATION

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

SPECIFICATION

PROPERTIES OF THE BASE -

Viscosity @ 25°C	poise	6 – 10
Specific gravity		1.08 – 1.12
Appearance		black

PROPERTIES OF THE HARDENER -

Viscosity @ 25°C	poise	0.5
Specific gravity		0.988
Appearance		Clear liquid

PROPERTIES OF THE MIXTURE -

Mix ratio base: hardener		4:1 pbw
		3.6:1 pbv
Viscosity @ 25°C	poise	2
Specific gravity		1.06 – 1.10
Usable life 100 grams mass		45 minutes

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. 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 measure out by weight, volume or by using all of the pre-weighed kit, but is 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 minimal air inclusion method described previously. This mixing process can take up to 4-5 minutes, 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.

CURE SCHEDULE

24 hours @ 25°C ,6 hours @ 50°C

In order to develop maximum properties ambient is recommended that the U2004B be allowed to cure till solid at ambient. Heat can then be applied to develop maximum hardness.

PROPERTIES OF CURED COMPOUND

Shore D hardness	DIN 53505	81
Deflection temperature	IEC1006	48°C
Tensile strength	ISO 527	18N/mm ²
Elongation at break	ISO 527	6%
Thermal Conductivity	ISO 8894-1	0.22 W/M/K
Dielectric strength	IEC 243-1	168 Kv/cm.
Dielectric constant	IEC 250	4.56 @ 50Hz
Volume resistivity	IEC 93	> 10 ¹³ ohm/cm ³
CTI	IEC 112	>550V



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STORAGE

24 months shelf life, stored between 10°C and 30°C.

PACKAGING

1kg, and 5 kg kit

HEALTH & SAFETY

See relevant Material Safety Data Sheet.

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