



TECHNICAL BULLETIN
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PRODUCT INFORMATION

ULTIMEG 2050L

SOLVENTLESS EPOXY
SINGLE COMPONENT
HIGH BOND STRENGTH
LOW TEMPERATURE CURE
NO VOC
CLASS H (180°C)

ULTIMEG 2050L EPOXY TRICKLE RESIN

GENERAL DESCRIPTION

ULTIMEG 2050L is a one-part epoxy resin that is trickle impregnated onto windings giving high bond strength working up to 180°C. The material has a lower viscosity to facilitate easier application through processing equipment. It is designed to give high mechanical strength to rotors in power tools reducing quality failure rates. The product offers non-flammable and virtually zero VOC processing. Application of a thin stream of the material to the hot rotating winding impregnates the winding completely and cures quickly at lower temperature with no drainage. This film when cured has exceptionally good mechanical, chemical and thermal properties and is also suitable for hermetic and Freon resistant equipment. The complete fill of the winding gives improved heat transfer again extending the life of the component.

APPLICATION

A trickle resin used to give high bond strength and excellent chemical resistance to electrical equipment. Suitable for hermetic and semi-hermetic applications.

SPECIFICATION:

VISCOSITY Brookfield at 25°C	6000- 7000 mPa
NON-VOLATILE CONTENT	100% reactive polymer
SPECIFIC GRAVITY	1.18 – 1.19
COLOUR	Translucent brown
FLASHPOINT	not applicable
SHELF LIFE	9 months at 20°C

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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PROCESSING

METHOD - trickle application

VISCOSITY - As supplied

WORKSHOP PRACTICE

1. When trickling onto hot windings, ensure adequate ventilation. See material safety data sheet.
2. The system is designed to trickle onto preheated windings at around 80-100°C and above. At this temperature the material will have controlled rheology. This control ensures the material impregnates into the winding then gels
3. It will be necessary to optimise processing to determine the best speed of rotation of the winding and temperature of application. This will be dependent on the size and design of the equipment.
4. Storage at temperatures even slightly above room temperature has an adverse effect on the stability of the product.

CURE SCHEDULE

Typical cure schedules for small open static windings are shown below. (Temperatures are those of components).

OVEN

TIME (minutes)	30	20
TEMPERATURE (°C)	120	130

Infrared lamp or Induction heating can be used to achieve rapid cure times to allow for fast processing.

CURRENT HEATING

TIME (minutes)	15	10-15	7-10	5-7
TEMPERATURE (°C)	120	130	140	150



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PROPERTIES OF CURED VARNISH (Estimated)

Shore D hardness	DIN 53505	90
Deflection temperature	IEC1006	120°C
Bond strength	IEC1033	23°C >400N
	Twisted coil	155°C 70N
Elongation at break	ISO 527	<0.5 %
Thermal Conductivity	ISO 8894-1	0.4 W/M/K
Dielectric strength	IEC 243-1	>200 kV/cm.
Dielectric constant	IEC 250	3.9 @ 50Hz
Volume resistivity	IEC 93	> 10 ¹³ ohm/cm ³
CTI	IEC 112	>550V

HEALTH & SAFETY

Refer to Material Safety Data Sheet available.

PACKAGING

25 kg, 5 kg, ½ kg bottles

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