



CROSSLINK TECHNOLOGY INC.

FORMULATED EPOXIES, URETHANES - CUSTOM CAST PARTS



TECHNICAL BULLETIN: CLR 2161 / CLH 5100

PRODUCT DESCRIPTION:

A HEAT CURE, LOW STRESS, EXTREMELY TOUGH, EPOXY COMPOUND. THIS SYSTEM WAS SPECIFICALLY DEVELOPED FOR USE ON OUTDOOR INSTRUMENT AND POWER TRANSFORMERS. THE CURED MATERIAL EXHIBITS EXCELLENT THERMAL STABILITY AND THERMAL CYCLING CHARACTERISTICS. THIS PRODUCT MEETS UL94-HB FLAMMABILITY REQUIREMENTS.

SALES SPECIFICATION	CLR 2161	CLH 5100
COLOUR	GREY	AMBER
VISCOSITY (NOTE 1, NOTE 4)	100000 - 150000 CPS @ 70 °C	100 - 300 CPS @ 22 °C
SPECIFIC GRAVITY	1.95 ± 0.03 gm/cm ³	1.10 ± 0.02 gm/cm ³
SHELF LIFE	12 MONTHS	12 MONTHS

HANDLING:

MIX RATIO BY WEIGHT (A:B) (NOTE 2)	100:20
MIXED VISCOSITY (NOTE 4)	800 cps @ 60 °C
POT LIFE OF 200 gm. mass (NOTE 4)	20.00 Min. @ 100 °C
GEL TIME OF 200 gm. mass (NOTE 4)	55.00 Min. @ 100 °C

CURE SCHEDULE (NOTE 3):

RECOMMENDED CURE SCHEDULE	4 Hrs. @ 125 °C
OPTIONAL POST CURE	150 @ 150 °C

CURED PROPERTIES: (NOT INTENDED FOR PREPARATION OF SPECIFICATIONS)

COLOUR	GREY
DENSITY (gm/cm ³)	1.70
SHORE HARDNESS	90D
TENSILE STRENGTH (psi) (ASTM D 638)	9500
TENSILE ELONGATION (%) (ASTM D 638)	3.0
FLAMABILITY RATING	UL94-HB (130c.)
COMPRESSIVE STRENGTH (psi)	22500
COMPRESSIVE MODULUS	215000
FLEXURAL STRENGTH (psi)	16500
FLEXURAL MODULUS (psi)	1400000
GUIDE TO OPERATING TEMPERATURE(°C)(NOTE 6)	150
LINEAR SHRINKAGE (in/in) (ASTM D 2566)	0.0075
MOISTURE ABSORPTION (% 24 Hours RT)	0.100
COEFFICIENT OF THERMAL EXPANSION (in/in/°C)	30 x 10 ⁻⁶

ELECTRICAL PROPERTIES

DIELECTRIC CONSTANT	@10 KHz	4.10
DIELECTRIC CONSTANT	@1 MHz	3.96
DISSIPATION FACTOR A	@10 KHz	0.0118
DISSIPATION FACTOR B	@1 MHz	0.0131
DIELECTRIC STRENGTH	561 Volts/Mil	62.5 Mil/Section
VOLUME RESISTIVITY		13 x10 ¹⁴ Ω•cm
DISSIPATION TEMPERATURE		3.4 x10 ¹³

NOTES

Note1 If a filled resin, settling may occur during transportation or storage. Fillers must be remixed before use.

Note2 Mix ratio must be within ± 2% of the stated amount and thorough mixing is required to avoid degraded final properties.

Note3 Other cure schedules may give satisfactory results, however, these should be determined by the customer for their given circumstances.

Note4 All measurements taken at 22°C unless otherwise specified.

Note5 These products may trigger allergic responses in some individuals. Prevent contact with skin, wash with plenty of soap and water immediately if contact occurs. Do not breathe vapours, provide good ventilation and exercise good housekeeping at work area. Read the Material Safety Data Sheet.

Note6 The “Guide to Operating Temperature” is based on our experience with materials of similar chemistry and/or thermal index. The ultimate suitability of this product for a given operating temperature is application dependent and may change according to the demands placed upon it in operation.

Note7 If indicated, the values under “Electrical Characteristics” may be based on supplier data for products with similar compositions. They are provided only as a guide and the recipient must test each material to determine its suitability for the intended application.

IMPORTANT

THE INFORMATION IN THIS BULLETIN IS BASED ON DATA OBTAINED BY OUR OWN RESEARCH AND IS CONSIDERED ACCURATE. ALL INFORMATION SUPPLIED BY CROSSLINK TECHNOLOGY INC., IS FURNISHED UPON THE EXPRESS CONDITION THAT THE PERSON RECEIVING THE PRODUCT SHALL MAKE THEIR OWN ASSESMENTS TO DETERMINE ITS SUITABILITY FOR THEIR PARTICULAR PURPOSE. NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING SUCH INFORMATION, OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF; THAT ANY PRODUCT SHALL BE MERCHANTABLE OR FIT FOR ANY PARTICULAR PURPOSE; OR THAT THE USE OF SUCH OTHER INFORMATION OR PRODUCT WILL NOT INFRINGE ANY PATENT.

