



“Our strength is in our formulations”

TECHNICAL BULLETIN:

XPD 1180 / CLI 4161

DESCRIPTION: A SOLVENTLESS, LOW VISCOSITY, TWO COMPONENT POLYURETHANE SYSTEM SPECIFICALLY DESIGNED FOR CASTING TRANSFORMERS, COILS AND ELECTRONIC COMPONENTS. THE CURED MATERIAL IS FLAME RETARDANT AND HAS EXCELLENT THERMAL SHOCK RESISTANCE. THE PRODUCT CONTAINS NO MDA OR TDI.

SALES SPECIFICATION:

XPD 1180

CLI 4161

COLOUR:	BLACK	AMBER
VISCOSITY (cps) (NOTE 1):	10,000 – 18,000	300
SPECIFIC GRAVITY (gm/cm ³):	1.57 ± 0.03	1.22 ± 0.02
SHELF LIFE:	6 MONTHS	6 MONTHS

HANDLING: (NOTES 1,2 & 5)

MIX RATIO BY WEIGHT (A : B)	100:16 (5:1 BY VOL.)
MIXED VISCOSITY (cps):	3,000 – 5,000
POT LIFE (200 gm mass):	30 Minutes
GEL TIME (200 gm mass):	1Hr.
PEAK EXOTHERM (200 gm mass)	40°C

CURE SCHEDULE: (NOTE 3)

4 HRS @ 60°C OR 2 HRS @ 100°C OR 7 DAYS @ 25°C

CURED PROPERTIES: (NOT INTENDED FOR PREPARATION OF SPECIFICATIONS)

COLOUR:	BLACK
SPECIFIC GRAVITY (gm/cm ³):	1.50
SHORE HARDNESS:	60 ± 5 D
GUIDE TO OPERATING TEMPERATURE:	(NOTE 7) 105°C
LINEAR SHRINKAGE (in/in):	(ASTM D 2566) 0.005
TENSILE STRENGTH (psi.):	(ASTM D 638) 900 – 1,200
ELONGATION (%)	(ASTM D 638) 30 - 50
MOISTURE ABSORPTION (%)	(24HR IMMERSION) 0.10
MEETS FLAMMABILITY REQUIREMENT	U.L. 94 V0

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ELECTRICAL CHARACTERISTICS: (NOTE 6)

DIELECTRIC STRENGTH (v/mil):		599
ARC RESISTANCE:		160 seconds
DIELECTRIC CONSTANT:	@ 10 KHz	4.10
DISSIPATION FACTOR:	@ 10 KHz	0.0514
SURFACE RESISTIVITY (ohms)		5.0×10^{13}
VOLUME RESISTIVITY (ohm – cm):		3.0×10^{14}

NOTES:

- 1) If a filled resin, settling may occur during transportation or storage. Fillers must be remixed before use.
- 2) The mix ratio must be within $\pm 2\%$ of the stated value and thorough mixing is required to avoid degraded properties.
- 3) Other cure schedules may yield satisfactory results however; these should be determined by the customer for his given application.
- 4) Unless otherwise specified, all measurements are taken at 22⁰C.
- 5) These products may trigger allergic reactions in some individuals. Prevent contact with skin; wash with plenty of soap and water if contact occurs and **Read the Material Safety Data Sheet** before using the materials. **Do Not Breathe Vapours** provide good ventilation and exercise good housekeeping at the work area.
- 6) If stated, 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.
- 7) If indicated, the “**Guide to Operating Temperature**” is based on our experience with materials of similar chemistry and/or thermal index. The ultimate suitability of a product for a particular operating temperature is application dependent and **may change according to the demands placed upon it in service.**

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 ASSESSMENT 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 MERCANTABLE OR FIT FOR ANY PARTICULAR PURPOSE; OR THAT THE USE OF SUCH OTHER INFORMATION OR PRODUCT WILL NOT INFRINGE ANY PATENT.

ISSUE DATE: JANUARY 1988

ISSUE NO: 1

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