

Ultralane® 778A/B



Flexible Sealant & Encapsulant for Electrical Applications

Ultralane® 778A/B is a highly flexible polyurethane system that cures at room temperature or can be accelerated with heat to achieve a rapid cure. The system provides excellent adhesion to most materials and sets quickly.

This Ultralane® 778A/B is often used to pot and seal wire harnesses. It can also be used as a soft, flexible encapsulant for low-stress potting of printed circuit boards, sensor, and pressure sensitive components. It has also been used to seal automotive wire bundles where they pass from the engine compartment to the passenger compartment in order to reduce noise and seal against carbon monoxide and other gases.

BENEFITS

- Very low initial viscosity & convenient mix ratio
- 100% solids, contains no mercury, TDI or MOCA
- Exceptional flexibility, tear resistance and thermal shock resistance
- Excellent dielectric properties

TYPICAL PROPERTIES	<u>Value</u>	<u>Test Method</u>
<u>Ultralane® 778A Properties</u>		
Appearance	Brown Liquid	Visual
Density	1.07 g/cc	ASTM D-2393
Viscosity at 25°C	300 cps	ASTM D-792
Flash Point, closed cup	>200°C (>392°F)	ASTM D-92
<u>Ultralane® 778B Properties</u>		
Appearance	Black Liquid	Visual
Density	0.96 g/cc	ASTM D-2393
Viscosity at 25°C	1,000 cps	ASTM D-792
Flash Point, closed cup	>93°C (>200°F)	ASTM D-92
<u>Mix Ratio</u>		
Parts by weight (volume)	2A:1B by weight (2A:1B by volume*)	Calculated
<u>Mixed Properties</u>		
Initial Viscosity	550 cps	ASTM D-792
Pot life (100 g mass)	8 minutes	Gardner
Peak Exotherm (100 g mass)	38°C (100°F)	ASTM D-2471
<u>Recommended Cure Schedule</u>	5 hrs at 25°C or 30 minutes @	
Any cure schedule selected for use should be confirmed through testing with your particular processing methods and your intended application.		

(Not for specification purposes. All tests run at 25°C unless otherwise noted.)

Product Datasheet

Cured Properties (cured 30 minutes at 80°C)	<u>Value</u>	<u>Test Method</u>
Appearance	Black	Visual
Cured Density	1.03 g/cc	ASTM D-792
Shore Hardness @ 25C	28A	ASTM D-2240
Shore Hardness @ 80C	10A	ASTM D-2240
Tensile Strength		ASTM D-638
@ -60°C (-76°F)	285 psi	
@ 25°C (77°F)	180 psi	
Tensile Elongation	250%	ASTM D-638
Tear Strength	27 lbs./in	ASTM D-624
Moisture absorption (7 days at 25°C - % weight gain)	< 0.10%	ASTM D-570
Water Vapor Permeability	1.0×10^{-6} g/hr/cm	ASTM E-96
Volume Curing Shrinkage	< 0.4 %	ASTM D-1241
Coefficient of Thermal Expansion (CTE) (per °C)	$< 250 \times 10^{-6}$	ASTM E-831
Thermal Conductivity	0.17 W/mK	ASTM D-2214
Thermal Shock, -80°C to 130°C, 10 cycles	Pass	Mil-I-16923
Volume Resistivity @ 25°C	1.4×10^{14} ohm-cm	ASTM D-257
Dielectric Strength	508 volts/mil	ASTM D-149
Dielectric Constant, @1KHz	4.0	ASTM D-150
Dissipation Factor, @1KHz	0.039	ASTM D-150

SUGGESTED PROCESSING GUIDELINES

Ultralane[®] 778A/B can be applied by pouring, using a brush, roller, squeegee, knife, or spatula. It is also suitable for meter-mix dispensing and can be supplied in dual syringe cartridges of many different sizes.

Weigh Part A and Part B in the recommended ratio as accurately as possible into a clean mixing container. Always use weighing equipment having accuracy in proportion to the amounts being weighted.

Blend by using a spatula or stirring stick for 2-3 minutes using a kneading motion. Scrape the bottom and sides of the mixing container carefully and frequently to produce a uniform mixture.

Apply adhesives to all surfaces to be bonded and then join together and lightly clamp or otherwise hold in place until the adhesive is set. Only contact pressure is required - do not use excessive clamping pressure as this may squeeze the adhesive out of the bond-line. Allow to cure at room temperature or use heat to cure as indicated in the recommended cure schedules.

STORAGE GUIDELINES

Store this material in a clean, cool and dry environment in its tightly closed original container. Products crystallize during storage may be reliquified by warming the contents of the shipping containers, loosely covered, to 65°C for 2-4 hours. Allow contents to cool to at least 30°C before continuing. Avoid extended exposure to extreme humidity. If the recommended storage conditions are observed the products will have a minimum shelf-life of 12 months from the date of shipment.

Product Datasheet



HANDLING PRECAUTIONS

Mandatory and recommended industrial hygiene procedures should be followed whenever these products are being handled and processed. For additional information please consult the corresponding material safety data sheets.

PERSONAL HYGEINE

Ultralane® 778A

Harmful if inhaled. May causes skin and eye irritation. Prolonged or repeated exposure may ause allergic skin and respiratory reactions.

Ultralane® 778B

May causes skin and eye irritation.

FIRST AID

In case of contact:

Ingestion: Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

Skin: Immediately wash with soap and water. Remove contaminated clothing and launder before reuse. Destroy contaminated shoes. Seek immediate medical attention.

Inhalation: Remove to fresh air. Seek immediate medical attention.

Eyes: Immediately flush eyes with water for at least 15 minutes. Seek immediate medical attention.

Overexposure Effects: Causes skin and eye irritation.

Medical Conditions Aggravated by Exposure: Skin and eye conditions.

Additional Information: Referral to a physician is recommended if there is any question about the seriousness of any injury.

DISCLAIMER

IMPORTANT: The following supersedes Buyer's documents. **SELLER / MANUFACTURER MAKES NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, INCLUDING OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** No statements herein are to be construed as inducements to infringe any relevant patent. Under no circumstances shall Seller / Manufacturer be liable for incidental, consequential or indirect damages for alleged negligence, breach of warranty, strict liability, tort or contract arising in connection with the product(s). Buyer's sole remedy and Seller's sole liability for any claims shall be Buyer's purchase price. Data and results presented are based on controlled or laboratory work and must be confirmed by Buyer by testing for its intended conditions of use. The product(s) has not been tested for, and is therefore not recommended for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended; or for uses for which implantation within the human body is intended.

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