

Ultralane[®] 1701A/B

POLYURETHANE SEALANT, ADHESIVE & ENCAPSULANT

Ultralane[®] 1701A/B is an easy to use, low viscosity system that cures to form a tough, flexible elastomer that has excellent chemical and moisture resistance. The mixed system has a low viscosity and convenient mix ratios by weight and volume. The cured polymer is flame retardant meeting UL 94VO requirements and does not contain antimony or brominated flame retardants. The system complies with RoHS (2002/95/EG) regulations and electronic waste regulations (2002/96/EG WEEE directive) of the European Union.

The Ultralane[®] 1701A/B system has excellent adhesion to metals including brass, glass, and many plastics including some thermoplastic Vulcanizates such as Santoprene[™]. It performs well as a sealant for electrical and industrial equipment and can be used as a tough, semi-flexible adhesive. It has excellent electrical properties and is an outstanding electrical potting or encapsulating material. This system can also be used to cast tough, semi-flexible parts such as gaskets, gears, and nesting fixtures that demonstrate good tear resistance.

Standard colors are Tan or Black, but custom colors are available on request. The neutral Tan color is easy to pigment or dye prior to curing to achieve a wide range of colors and visual effects. Other custom variations are possible, please contact us to discuss the development of a custom variant that would be suitable for your application.

SUGGESTED APPLICATIONS:

- Tough, semi-rigid Parts
- Bonding or sealing metal, glass, plastic, and other substrates.
- Electric Potting & Encapsulation of transformers, coils, and other components

HANDLING PROPERTIES	VALUE	TEST METHOD
<u>Ultralane 1700A (resin)</u>		
Visual Appearance	Clear Amber liquid	
Density, Part A	1.25 g/cm ³	ASTM E-201
Viscosity, Part A, at 25°C	100 cps	ASTM D-2393
Flash Point	>200°C	ASTM D-92
<u>Ultralane 1700B (hardener)</u>		
Visual Appearance	Off-white or Black Liquid	
Density,	1.56 g/cm ³	ASTM E-201
Viscosity, Part B, at 25°C	6,200 cps	ASTM D-2393
Flash Point	>200°C	ASTM D-92
Mixed Viscosity at 25°C	1,100 cps	ASTM D-2393
Mix Ratio by weight and volume:	40A:100B by weight or 1A:2B by volume	
Pot life, 100 gram mass	~45 minutes	

Minimum Demold time: 12 hours at room temperature or allow to gel for at least 2 hours then cure for 4 hours at 150°F or 2 hours at 80°C. Cool prior to demolding.

Cure Schedules: 24 hours at 25°C (Full properties may take up 3-7 days to develop at 25°C) or gel at 25°C for at least 2 hours, then heat cure for 4 hours at 80°C or 2 hours at 95°C.

(Small parts, especially those having masses less 10 grams or cross-sectional areas less than 1/8" may not require a room temperature gel prior to heat curing as this step is designed to reduce shrinkage and warpage in large masses and thicker cross-sections.)

CURED PROPERTIES

TEST METHOD

Density	1.45 g/cm ³	ASTM D-792
Hardness, Shore A at 25°C	85 – 95	ASTM D-2240
Ultimate Tensile Strength	1,400 psi	ASTM D-638
Flexural Strength	3200 psi	ASTM D-638
Coefficient of Thermal Expansion (0°C to 80°C)	55 ppm/°C	ASTM E-381
Thermal conductivity	0.60 W/mK	ASTM D-2214
Insulation Class	Class B (266°F/130°C)	IEC 85
Relative Thermal Index (RTI)	266°F / 130°C	UL 746B
Flame Retardance	UL 94VO at 6mm	UL94VO
Dielectric Strength	30 KV/mm	IEC 243
Surface Resistance	1 x 10 ¹⁴ ohm	IEC 93
Volume Resistivity @ 25°C	1 x 10 ¹⁴ ohm-cm	IEC 93
Dielectric Constant @ 23°C / 50°C / 80°C	5.5 / 6.1 / 6.8	IEC 250
Dissipation Factor @ 23°C / 50°C / 80°C	0.043 / 0.086 / 0.124	IEC 250
Electrolytic Corrosion	A / 1.2	VDE 0307
Tracking Resistance	CTI > 600V	IEC 112

PROCESSING AND APPLICATION INSTRUCTIONS:

If any settling or separation is observed in the Ultralane 1701B, thoroughly re-mix using a paint shaker or by manual mixing using a paint stirrer to ensure that the material is uniform prior to use.

To use, weigh Part A and Part B into a clean mixing container. Mixing containers should preferably be made of polypropylene, polyethylene, glass, or non-corroding metal. (Stainless steel, aluminum, etc.). Always use weighing equipment having accuracy that is ±1% or less of the smallest quantity that you will be weighing. Blend Parts A & B thoroughly using a spatula or stirring stick for at least 2 minutes using a kneading motion. Scrape the bottom and sides of the mixing container carefully and frequently to produce a uniform mixture.

This product is also suitable for use in meter mix dispensing equipment at a 1 part A to 2 part B by volume mix ratio.

PACKAGING AVAILABLE:

This product is available in 5-gallon pails and 1-1/2 gallon kits. Other customer packaging and dual syringe cartridges may be available by request.

Please call use with any special packaging requests or for information on custom kitting.

STORAGE GUIDELINES:

Store these materials in a clean, cool, and dry environment in their tightly closed original containers. Protect from extended exposure to temperatures below 15°C (59°F). Crystallization may occur if the material is exposed to cold for extended periods. If this occurs, heat the entire container for 3-4 hours at 50 °C -70°C to re-liquefy the material. Allow to cool to ambient temperature prior to using. Also, protect the Ultralane 1700A from exposure to moisture or high humidity. Tightly re-seal containers after use. If the recommended storage conditions are observed these products will have a minimum shelf-life of 12 months from the date of shipment.

HANDLING PRECAUTIONS & PERSONAL HYGIENE

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.

FIRST AID

In case of contact:

Skin – Immediately wash skin thoroughly with mild soap and water. Remove contaminated clothing and wash before reuse. Destroy contaminated shoes and other articles made of leather.

Eyes – Immediately flush eyes with plenty of water for 15 minutes and get prompt medical attention.

Inhalation - Remove person to fresh air. Administer oxygen or artificial respiration if necessary. Call a physician.

Ingestion - Do not induce vomiting. Dilute with plenty of water and contact physician immediately. Never give anything by mouth to an unconscious person.

DISCLAIMER:

IMPORTANT: The following supercedes Buyer's documents. **SELLER / MANUFACTURER MAKES NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, INCLUDING OF MERCHANTABILITY OR FITNESS FOR A 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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