

Product Datasheet

Provisional - data still under development



Ultralane[®] 775-1A/B

HIGH STRENGTH POLYURETHANE ADHESIVE SYSTEM

Ultralane[®] 775-1 is a two-part polyurethane adhesive designed for bonding plastics with minimal surface preparation. It has been successfully used for bonding polycarbonate, ABS, nylon, and Metton[®]. It is also an excellent choice for bonding primed or painted metals and many types of rubber. The Ultralane[®] 775-1A/B system is MOCA & TDI free and when fully cured provides exceptional environmental and impact resistance.

It can be supplied in custom colors and viscosities or in softer/more elastic or harder/stiffer versions. Please contact us to discuss your application if you'd like to receive samples of a custom color or to discuss the development of a custom variant that would be suitable for your application.

SUGGESTED APPLICATIONS:

- Bonding plastic to rubber, metals, or themselves
- Sealing electrical components or modules
- Wire tacking and other electronic assembly or repair applications

HANDLING PROPERTIES	VALUE	TEST METHOD
<u>Ultralane 775-1A (resin)</u>		
Visual Appearance	Off-white semi-paste	
Density, Part A	1.05 g/cm ³	ASTM E-201
Viscosity, Part A, @ 25°C	40,000 cps	ASTM D-2393
Flash Point	>100°C	ASTM D-92
<u>Ultralane 720-1B (hardener)</u>		
Visual Appearance	Red or Black colored flowable liquid	
Density,	1.25 g/cm ³	ASTM E-201
Viscosity, Part B, @ 25°C	12,000 cps	ASTM D-2393
Flash Point	>100°C	ASTM D-92
Mix Viscosity	30,000 cps	ASTM D-2393
Mix Ratio by weight	85A: 100B	
Mix ratio by volume:	1A : 1B	
Pot life, 4oz / 150 gram mass	15 minutes	
Processing & handling times:	<u>25°C/ 77°F</u> <u>60°C/140°F</u> <u>100°C/ 212°F</u>	
Handling strength	4 hours 1 hours 6 minutes	
90% of Final Strength	16 hours 2 hours 10 minutes	
Full Cure strength	24 - 48 hrs 4 hours 15 minutes	

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CURED PROPERTIES	VALUE	TEST METHOD
Hardness, Shore A	80 ±5	ASTM D-2240
Ultimate Flexural Strength	10,800 psi	ASTM D-790
Flexural Modulus	250,00 psi	ASTM D-790
Ultimate Tensile Strength	2,100 psi	ASTM D-638
Tensile Elongation	250%	ASTM D-638
Tensile Lap Strength		ASTM D-1002
Aluminum to aluminum	1400 psi	
Metton to Metton	800 psi (substrate failure)	
Styrene Butadiene Rubber to cotton braid	30 psi (substrate failure)	
Glass Transition Temp (Tg) per DMA	86°F / 30°C	ASTM D-4065
Coefficient of Thermal Exp. (CTE)		ASTM E-831
Alpha 1 (below Tg)	135 ppm/°C	
Alpha 2 (above Tg)	230 ppm/°C	

* Molds are half round steel, 10 inches long, 0.875 inches deep

PROCESSING AND APPLICATION INSTRUCTIONS :

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 Part 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. For Bubble-free bond-lines vacuum degas after mixing.

The mixed adhesive mix can be applied with a spatula, stiff brush, or other tool to the dry Surfaces to be bonded. A layer of adhesive 0.002 to 0.004 inches thick will normally impart the greatest lap shear strength to a joint. The bonded surfaces should be assembled and clamped as soon as the adhesive has been applied. Even contact throughout the bond-line suffices to ensure proper cure and a strong bond.

PACKAGING AVAILABLE:

This product is available in 50ml and 200ml dual syringes. The dual syringe cartridges eliminate the need for hand mixing and allow for air-free mixing and easy application to your bond-lines.

It can also be supplied in pint, quart, gallon, and 5-gallon pails.

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

STORAGE GUIDELINES:

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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 4 hours at 70°C to re-liquefy the material. Allow to cool to ambient temperature prior to using. Also protect the EpoPro 104A&B from exposure to moisture or high humidity. Tightly re-seal containers after use. If the recommended storage conditions are observed the products will have a minimum shelf-life of 12 months from the date of shipment.

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 HYGIENE:

Ultralane 775-1A

WARNING! Harmful if inhaled. Causes skin and eye irritation. Causes allergic skin and respiratory reaction. Avoid contact with eyes, skin, and clothing. Avoid breathing vapor or mist. Avoid prolonged or repeated contact with skin. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling.

Ultralane 775-1B

CAUTION! In accord with good industrial practice, handle with due care. Could cause eye, skin, and respiratory irritation. Prolonged or repeated skin contact or inhalation of vapors may cause allergic skin or respiratory reactions. Harmful if inhaled or swallowed. Avoid contact with eyes, skin, or clothing. Wear eye protection and impervious gloves when handling. Wash thoroughly after handling. Avoid breathing vapor or mist. Keep containers closed when not in use. Use only with adequate ventilation.

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 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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