Product Datasheet

SP&S Specialty Polymers and Services

Ultralane® 777-1A/B

POLYURETHANE SEALANT, ADHESIVE & ENCAPSULANT

Ultralane® 777-1A/B is an easy to use, low viscosity system that cures to form a tough, hard rubber 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 to UL 94VO requirements and does not contain any antimony or halogen 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 Cued polymer also conforms to the requirements of the Household Appliances Standard IEC 60 335.

The Ultralane® 777-1A/B system has excellent adhesion to metals, glass, and many plastics. 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 use 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-flexible Parts
- Bonding or sealing metal, glass, plastic, and other substrates.
- Electric Potting & Encapsulation of transformers, coils, and other components

HANDLING PROPERTIES	VALUE	TEST METHOD
Ultralane 777-1A (resin)		
Visual Appearance	Clear Amber liquid	
Density, Part A	1.22 g/cm³	ASTM E-201
Viscosity, Part A, @ 25ºC	2,000 cps	ASTM D-2393
Flash Point	>200°C	ASTM D-92
Ultralane 777-1B (hardener)		
Visual Appearance	Off-white or Black Liquid	
Density,	1.58 g/cm³	ASTM E-201
Viscosity, Part B, @ 25ºC	3,000 – 4,500 cps	ASTM D-2393
Flash Point	>200°C	ASTM D-92
Mixed Viscosity @ 25ºC	2,200 cps	ASTM D-2393
Mix Ratio by weight and volume:	40A : 100B by weight or 1A:2B by volume	
Pot life, 140 gram mass	~30 minutes	
Demolding time:	8 hours @ room temperature or allow to gel then cure for 3 hours at	

Cure Schedules:	150ºF or 2 hours @ 80ºC. Allow to cool prior to demolding. 24 hours @ 25ºC (Full properties may take up to 7 days at room temperature) **or** gel at 25ºC for 2–24 hours, then heat cure for 8 hours @ 80ºC or 4 hours @ 95ºC.

CURED PROPERTIES		TEST METHOD
Density	1.45 g/cm^3	ASTM D-792
Hardness, Shore D at 25°C	76	ASTM D-2240
Ultimate Tensile Strength	2,810 psi	ASTM D-638
Flexural Strength	4620 psi	ASTM D-638
Coefficient of Thermal Expansion (0°C to 80°C)	50 ppm/°C	ASTM E-381
Thermal conductivity	0.65 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 3mm	UL94VO
Glowing Wire Ignition Temp. (GWIT)	1562°F	IEC60692-2-13
Glowing Wire Flammability Index (GWFI)	1562°F	IEC60692-2-12
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	5.6 / 6.3 / 6.9	IEC 250
Dissipitation Factor @ 23°C / 50°C / 80°C	0.044 / 0.088 / 0.129	IEC 250
Electrolytic Corrosion	A / 1.2	VDE 0307
Tracking Resistance	CTI > 600V	IEC 112

PROCESSING AND APPLICATION INSTRUCTIONS :

The Ultralane 777-1B component may settle during storage or transportation. Shaking or stirring the container of 777-1B prior to use will ensure that the material is uniform.

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.

PACKAGING AVAILABLE:

This product is available in 5-gallon pails as well as gallon, and quart kits.

It can be supplied in dual syringe cartridges of approximately 50ml or 400ml. The dual syringe cartridges eliminate the need for hand mixing and allow for almost air free injection into your mold.

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 15ºC (59ºF). Crystallization may occur if the material is exposed to cold for extend periods. If this occurs, heat the entire container for 4 hours at 70ºC 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 & PERSONAL HYGENIE

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.

Ultralane 777-1A

WARNING! Can cause skin irritation, eye irritation, allergic respiratory reaction, and allergic skin reaction. Can be Harmful if inhaled. May cause eye & skin irritation. 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. Do not take internally.

Ultralane 777-1B

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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