Product Datasheet

Ultralane® 760/761

High Performance Polyurethane Encapsulatnt & Sealant

Typical Properties

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

Ultralane 760 Resin Properties:

Appearance	Visual	Liquid Amber
Specific Gravity	ASTM D-1475	1.20 g/cc
Viscosity	ASTM-D-2393	40 cP
Flash point, closed cup	ASTM D-92	>110°C (>230°F)

Ultralane 761 Hardener Properties:

Appearance	Visual	Liquid black
Specific Gravity	ASTM-D-1475	1.05 g/cc
Viscosity	ASTM-D-2393	3125cP
Flash Point, closed cup	ASTM D-92	>93°C (>200°F)

Mix Ratio: 760 : 761

Parts by weight (by volume) 24 : 100 (21.6: 100)

Mixed Properties:

Initial Viscosity at 25°C	ASTM-D-2393	3000 cP
Time to reach 100,000 cP		6 – 9 minutes
Pot life OC-WL-001@25°C		15 minutes

Recommended Cure Schedules:

72 hrs at 25°C **or** 12 hrs at 60°C **or** 1 hr at 80°C

Please note: any cure schedule selected for use should be confirmed through testing as being appropriate for your particular processing methods and for your intended application.

Cured Properties (cured 7 days at 25°C)

Appearance	Visual	Black
Density	ASTM-D-1475	1.08 g/cc
Shore Hardness	ASTM D-2240	78A
Volume shrinkage	ASTM D-792	1.21%
Tensile Strength at break	ASTM D-638	1380 psi
Tensile Elongation	ASTM D-638	160%
Water absorption	ASTM D-570	
24 hrs @ 25°C		2.1%
Thermal conductivity	ASTM D-638	4.9 x 10^{-4} cal/cm-sec-°C
Glass Transition Temp (Tg)	PERKIN ELMER APPL. CAST #20	-58°C
Coefficient of thermal expansion, in/in/°C	ASTM E-381	
(<-5°C) Alpha 1		54 x 10^{-6}
(-5°C to 125°C) Alpha 2		200 x 10^{-6}
Surface resistivity	ASTM D-257	6.1 x 10^{13} Ω-cm
Volume resistivity	ASTM D-257	7.0 x 10^{12} Ω-cm
Dielectric strength	ASTM D-149	520 volts/mil
Dielectric Constant	ASTM D-150	
60 Hz		4.20
1MHz		4.60
Dissipitation Factor	ASTM D-150	
60 Hz		0.020
1MHz		0.073

Ultralane 760/761 is black, low viscosity, two-part polyurethane system designed to protect sensitive electronic components in automotive applications. It is an excellent encapsulant and sealant and can be used as an adhesive and sealant in many applications.

Features:

- Rapid gel time in small masses
- Excellent thermal cycling resistance (-55°C to 125°C)
- Excellent Adhesion to most substrates (plastics, aluminum and PWB materials)
- Proven long-term performance for automotive applications

Material Performance Data:

Fluid Exposure Data: cured Ultralane 760/761 soaked for 4 hours at 100°C in the listed fluids.

Fluid	Mass Change, %	Volume Change, %
Power Steering Fluid	2.1	0.6
Motor Oil	3.6	1.1
Transmission Fluid	4.6	1.2
Coolant	5.7	1.5

Thermal Aging: cured Ultralane 760/761 kept at 115°C continuously for the indicated time periods.

Aging at 115C	Shore A Hardness	% Weight loss
Initial	78	-
2 weeks	75	-0.30%
4 weeks	72	-0.50%
6 weeks	72	-0.50%
8 weeks	73	-1.28%

Storage Guidelines:

Store this material in a clean, dry environment in its tightly closed original container. The Ultralane 760 must be stored above 15°C or it can begin to crystallize and may require heating to 70°C to return it to its normal consistency and performance. Ideal storage temperatures for both materials are between 18°C and 35°C (64-95°F). Under these conditions the products will have a minimum shelf-life of 12 months from the date of shipment. If either component is observed to be thick or crystalline in appearance heat to 60°C - 70°C for 2 to 4 hours to re-liquefy. After heating, cool to room temperature before using material or the pot life will be substantially reduced.

Processing Guidelines:

Mix using Meter-mix dispensing, or mix manually, as follows. Weigh the desired amount of hardener into mixing container whose weight has been tared. Weigh the appropriate amount of resin into mixing container with hardener based on the products mix ratio. Mix thoroughly by means of mechanical mixer or manual stirring. We recommend mixing for at least 2 minutes to ensure thorough mixing. Scrape the sides and bottom of the mixing container with a spatula or other tool several times during mixing to ensure that all of the material is thoroughly mixed.

After mixing, vacuum de-airing is recommended to remove any entrapped air from the mixing procedure. To de-air most products, 1-2 minutes under full vacuum is recommended for each quart of volume of mixed material. Quickly dispense potting material into cavity or channel to be sealed; be certain not to trap air bubbles as viscosity builds.

To reduce the cure time, the Ultralane 760/761 can be allowed to gel at room temperature and then post-cured using the heat cures listed on the first page of this bulletin. Alternate cure schedules are possible. Please contact us with any questions about curing schedules.

Many small volume applications can be processed and directly cured at elevated temperatures using the cure schedules listed or a cure schedule customized to your application.

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 760

WARNING! May cause eye irritation. Prolonged or repeated skin contact may cause irritation, and may cause skin reaction. Harmful if inhaled, if swallowed. Avoid contact with eyes, skin, or clothing 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 761

CAUTION! In accordance with good industrial practice, handle with due care. Avoid contact with eyes, skin, and clothing. Wash thoroughly after use.

First Aid

In case of contact:

Skin - Wash skin thoroughly with mild soap and water. Remove contaminated clothing and wash before reuse. Discard contaminated shoes and other articles made of leather

Eyes - Flush eyes with plenty of water for 15 minutes and get prompt medical attention.

Inhalation - Remove person to fresh air

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

Disclaimer:

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