

Ultralane[®] 770A/B

Flexible Polyurethane Adhesive & Sealant

Ultralane[®] 770A/B is a gap filling, two component, flexible polyurethane adhesive & sealant. This product is well-suited for bonding a variety of plastics including polycarbonate and polyamides, as well as primed metals and other materials. It provides a sag and run resistant viscosity and can be used to fill gaps up to 3/8" thick.

The standard color is gray, but custom colors are available by request. Other custom variations are possible, please contact us to discuss your application if a custom variant would be desirable for your application.

BENEFITS

- Ideal for Bonding Plastics & for Flexible Sealing Applications
- Good for Thick Bondlines and for Gap Filling
- Thixotropic – sag & run resistant
- Low shrinkage

HANDLING PROPERTIES	VALUE	TEST METHOD
<u>Ultralane[®] 770A</u>		
Visual Appearance	White	Visual
Density	1.10 g/cm ³	ASTM E-201
Viscosity, Part A, @ 25°C	48,000 cP	ASTM D-2393
Flash Point	>200°C (392°F)	ASTM D-92
<u>Ultralane[®] 770B</u>		
Visual Appearance	Gray - Black	Visual
Density	1.20 g/cm ³	ASTM E-201
Viscosity, Part B, @ 25°C	50,000 cP	ASTM D-2393
Flash Point	>93°C (200°F)	ASTM D-92
<u>Mixed Properties</u>		
Mix Ratio	92A:100B by weight (100A:100B by volume)	Calculated
Mixed Viscosity	50,000 cP	ASTM D-2393
Pot life (100 grams) @ 25°C	15 minutes	ASTM D-2471
Shelf-life	at least 6 months @ room temperature (~ 25°C)	
Suggested cure times	7 days @ 25°C or 16 hours at 40°C or 4 hours at 60°C*	
*Note: many other cure schedules are possible - please contact us to discuss, if this this might be of interest.		

Product Datasheet

PHYSICAL PROPERTIES

	<u>VALUE</u>	<u>TEST METHOD</u>
Color	Gray	Visual
Shore Hardness	25-30D / 85A	ASTM D-2240
Tensile Strength	1300 psi	ASTM D-638
Tensile Modulus	6240 psi	ASTM D-638
Tensile Elongation at Break	165%	ASTM D-638
Roller Peel Test	23 pli	ISO 4578
Glass Transition Test (by DMA)	86 °F (30 °C)	ASTM E-1356
Lap Shear Strengths with various substrates & conditions:		ASTM D-1002

Material

Aluminum*	1250 psi
Steel 37/11*	1050 psi
Stainless Steel V4A*	1200 psi
Galvanized Steel*	1000 psi
Copper*	1500 psi
Brass*	1030 psi
GRP‡	1100 psi
CFRP‡	1200 psi
SMC‡	750 psi
ABS‡	600 psi
PMMA‡	600 psi
Polycarbonate‡	740 psi
Polyamides‡	330 psi

* Pretreatment: Sandblasting

‡ Pretreatment: Lightly Abraded and Alcohol Degreased

Effect of Temperature on Lap Shear Strength:

Test Temperature

-40°C (-40°F)	4200 psi
-20°C (-4°F)	3800 psi
0°C (32°F)	2500 psi
20°C (68°F)	1250 psi
40°C (104°F)	1400 psi
60°C (140°F)	300 psi
80°C (176°F)	300 psi

After Tropical Aging at 40°C and in 92% relative humidity:

Aging Period

Initial results	1250 psi
30 days	470 psi
60 days	760 psi
90 days	Degraded

After Thermal Cycling: (100 Cycles of 6 hours from -30°C to 70°C):

Aluminum to Aluminum Bonds: 1150 psi

Product Datasheet

Chemical Resistance

<u>Chemical</u>	<u>30 Day Immersion</u>	<u>60 Day Immersion</u>	<u>90 Day Immersion</u>
Control	1250 psi	1250 psi	1250 psi
Mineral Spirits	160 psi	145 psi	80 psi
Gasoline	260 psi	230 psi	250 psi
Ethyl Acetate	60 psi	70 psi	70psi
Acetic Acid, 10%	30 psi	0 psi	0 psi
Xylene	120 psi	160 psi	100 psi
Lubricating Oil	1380 psi	810 psi	1060 psi
Paraffin	1470 psi	1710 psi	1180 psi
Water (73°F)	1280 psi	1230 psi	490 psi
Water (140°F)	1130 psi	700 psi	--
Water (194°F)	Degraded	Degraded	Degraded

NOTE: Typical Properties determined using Ultralane® 770A/B cured 16 hours @ 40°C cure - unless otherwise stated. Values are based on laboratory or average production results – not for specification purposes.

SUGGESTED PROCESSING GUIDELINES

Ultralane® 770A/B can be applied by squeegee, knife, or spatula. It is also suitable for meter-mix dispensing and can be supplied in dual syringes cartridges for use with static mixing nozzles.

For manual mixing, 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 1-2 minutes using a kneading motion. Scrape the bottom and sides of the mixing container carefully and frequently to produce a uniform mixture. Always apply the adhesive to clean, dry surfaces.

For best bond strength, roughen surface to be bonded with wire brush, sand-blasting, etc. After roughening, clean and dry surface and remove and loose material prior to bonding. Optimal bond strengths are typically achieved with an adhesive bondline thickness of 3 – 5 mils, but larger gaps and thicker bondlines are possible with this adhesive without major loss of mechanical strength. For best bonding performance with metals

STORAGE GUIDELINES

Store this material in a clean, cool and dry environment in its tightly closed original container. These materials must be protected from exposure to moisture. After opening, re-blanket cans with dry nitrogen or another dry inert gas prior to re-sealing the containers to help protect against moisture.

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

Product Datasheet



Ultralane® 770A - WARNING! Causes skin, eye, and respiratory irritations. May cause allergic skin and respiratory reactions. Causes irritation if inhaled and can cause skin irritation, eye irritation, allergic respiratory reaction, and allergic skin reaction. Avoid breathing vapor or mist. Avoid contact with eyes, skin, and clothing. Keep container closed when not in use. Use with adequate ventilation. Wash thoroughly after handling.

Ultralane® 770B - DANGER! Corrosive - causes eye burns. Can cause skin irritation. Do not get in eyes. Avoid breathing vapor or mist. Avoid contact with skin and clothing. Keep container closed when not in use. Use with adequate ventilation. Wash thoroughly after handling. Notice! Contains crystalline silica. Breathing dust may cause cancer and delayed lung injury.

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: Contact with liquid causes eye and skin irritation. If inhaled causes breathlessness, chest discomfort, and reduced pulmonary function. May cause allergic skin and respiratory reactions in some individuals, leading to asthma type spasms of the bronchial tubes and difficulty in breathing.

Medical Conditions Aggravated by Exposure: Allergy, eczema, skin, eye or respiratory conditions.

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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