

**Advanced Materials****ARALDITE<sup>®</sup> 2026 A/B**

(XD 4700/HARDENER XD 4710)

**CLEAR POLYURETHANE ADHESIVE**

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**Description**

ARALDITE 2026 A/B polyurethane adhesive is a clear/transparent, two-component system that cures at room temperature. It is well suited for bonding of selected thermoplastics and thermoset composites as well as dissimilar substrates including plastics to metal and glass.

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**Applications**

ARALDITE 2026 A/B polyurethane adhesive is suitable for bonding:

Thermoplastics  
Composites  
Metals  
Glass

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**Advantages**

Transparent – water clear  
Flexible  
Room temperature curing

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Typical Properties	Property	Test Method	Test Values <sup>1</sup>	
			Resin	Hardener
	Color/appearance	Visual	Transparent	Transparent
	Specific Gravity	ASTM D-792	Liquid	Liquid
	Viscosity, cP @ 77°F (25°C)	ASTM D-2393	1.10	1.10
			15,000	9,000

<sup>1</sup> Tested at 77°F (25°C)

Typical Mixed Properties	Property	Test Method	Test Values <sup>1</sup>
	Reaction Ratio (by weight)		100R/100H
	Reaction Ratio (by volume)		100R/100H
	Pot Life, minutes @ 77°F (25°C), 4 fl. oz. mass	ASTM D-2471	3 - 4
	Mixed viscosity, cP @ 77°F (25°C)	ASTM D-2393	10,000

<sup>1</sup> Tested at 77°F (25°C)

Recommended Cure Schedules	Temperature	Handling Strength	Minimum Cure Time
	50°F (10°C)	4 hours	60 hours
	59°F (15°C)	2.5 hours	15 hours
	77°F (25°C)	1 hour	8 hours
	104°F (40°C)	15 minutes	4 hours
	140°F (60°C)	6 minutes	30 minutes
	212°F (100°C)	2 minutes	12 minutes

<sup>1</sup>Tested @ 77°F (25°C)

## Processing

### Application of Adhesive

The resin/hardener mix is applied with a spatula to the pretreated and dry joint surfaces.

A layer of adhesive 0.002 to 0.004-inches (0.05 to 0.10-mm) thick will normally impart the greatest lap shear strength to a joint.

The joint components should be assembled and clamped as soon as the adhesive has been applied. Even contact throughout suffices to ensure proper cure.

### Standard Test Specimens

Unless otherwise stated, the figures given below were all determined by testing standard specimens made up by lap-jointing 4-inch x 1-inch x 0.06-inch (10-cm x 2.5-cm x 1.5-mm) strips of aluminum. The joint area was 0.5 x 1 inch (12.5 mm x 2.5 cm) in each case.

**Typical Physical Properties****Lap Shear Strength, psi (MPa)****Tested on Metal Substrates**

Cured 16 hours @ 104°F (40°C)

**Test Method**

ASTM D-1002

<b><u>Metal</u></b>	<b><u>Substrate Thickness (in./mm)</u></b>	<b><u>Test Values</u></b>
Aluminum	0.039/1.0	3050 (21)
Carbon Steel	0.039/1.0	2325 (16)
Stainless Steel	0.039/1.0	3350 (23.1)
Galvanized Steel <sup>1</sup>	0.06/1.5	1150 (7.9)
Copper	0.06/1.5	3475 (23.9)
Brass	0.06/1.5	2600 (17.9)

<sup>1</sup>Surface degreased only, not roughened.**Lap Shear Strength, psi (MPa)****Tested on Plastic Substrates**

Cured 16 hours @ 104°F (40°C)

<b><u>Substrate</u></b>	<b><u>Test Values</u></b>
SMC	1150 (7.9)
ABS	875 (6)
Polycarbonate	875 (6)
Acrylic	725 (5)
GRP	1150 (7.9)
GRE	3050 (21)
Nylon	450 (3.1)
Glass	1025 (7)

**Lap Shear Strength, psi (MPa)****Effect of Test Temperature**

Load applied 10 minutes after specimens reach test temperature.

<b><u>Cure Cycle</u></b>	<b><u>Test Temp.</u></b>	<b><u>Test Values<sup>(1)</sup></u></b>
7 days @ 77°F (25°C)	-58°F (-50°C)	2050 (14.1)
	-22°F (-30°C)	2250 (15.5)
	-4°F (-20°C)	2600 (17.9)
	32°F (0°C)	3325 (22.9)
	68°F (20°C)	2900 (20)
	104°F (40°C)	1150 (7.9)
	140°F (60°C)	600 (4.1)
	176°F (80°C)	450 (3.1)
	212°F (100°C)	300 (2)
	24 hours @ 77°F (25°C) + 30 minutes @ 176°F (80°C)	-58°F (50°C)
-22°F (-30°C)		2750 (18.9)
-4°F (-20°C)		2850 (19.6)
32°F (0°C)		3625 (25)
68°F (20°C)		2900 (20)
104°F (40°C)		1450 (10)
140°F (60°C)		650 (4.5)
176°F (80°C)		450 (3.1)
212°F (100°C)		300 (2)

<sup>1</sup>Tested @ 77°F (25°C)

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**Typical Physical Properties****Lap Shear Strength, psi (MPa)*****Effect of Immersion***

Cure cycle 16 hours @ 104°F (40°C). Immersion for 90 days in media listed.

<b><u>Media</u></b>	<b><u>Test Values<sup>(1)</sup></u></b>
Standard - As prepared	2900 (20)
Gasoline	2475 (17)
Ethyl Acetate	1825 (12.6)
Acetic Acid 10% - 30 day immersion	1825 (12.6)
Xylene	2325 (16)
Lubricating Oil - HD30	2900 (20)
Paraffin	2550 (17.6)
Water @ 68°F (20°C)	1150 (7.9)
Water @ 68°F (20°C) – 30 day immersion	2325 (16)
Water @ 140°F (60°C)	600 (4.1)
Water @ 194°F (90°C) – 30 day immersion	875 (6)

**Lap Shear Strength, psi (MPa)*****Effect of Tropical Exposure***

(104°F/40°C/92% R.H.)

**On Aluminum**

<b><u>Cure Cycle</u></b>	<b><u>Exposure Time</u></b>	<b><u>Test Values<sup>(1)</sup></u></b>
16 hrs @ 104°F (40°C)	0 days	3050 (21)
	30 days	1200 (8.3)
	60 days	900 (6.2)
	90 days	900 (6.2)

**On Polycarbonate**

<b><u>Cure Cycle</u></b>	<b><u>Exposure Time</u></b>	<b><u>Test Values<sup>(1)</sup></u></b>
16 hrs @ 104°F (40°C)	0 days	900 (6.2)
	30 days	725 (5)
	60 days	725 (5)
	90 days	425 (2.9)

**Lap Shear Strength, psi (MPa)*****Effect of Heat Aging***

Cured 16 hours @ 104°F (40°C).

<b><u>Aging Temperature</u></b>	<b><u>Exposure Time</u></b>	<b><u>Test Values</u></b>
158 °F (70°C)	0 days	3050 (21)
	30 days	3625 (25)
	60 days	3625 (25)
	90 days	3775 (26)

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**Typical Physical Properties** continued

<b><u>Property</u></b>	<b><u>Test Method</u></b>	<b><u>Test Values<sup>1</sup></u></b>
<b>Hardness</b> , Shore D (Shore A)	ASTM D-1002	48 (94)
<b>Elongation</b> , %	ASTM D-638	50
<b>Tensile Strength</b> , psi (MPa)	ISO R527	2600 (17.9)
<b>Roller Peel Test</b> , pli (N/mm)	ISO 4578	45 (7.9)
<b>Glass Transition Temperature</b> , °F (°C)	ASTM D-4065	68 (20)
<b>Thermal Cycling</b> – 100 cycles of 6 hr. duration from -22°F to 158°F (-30°F to 70°C), psi (MPa)		2600 (17.9)

<sup>1</sup>Tested @ 77°F (25°C)

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**Storage and Shelf Life**

ARALDITE polyurethane adhesive components should be stored in their original, sealed containers at room temperature. Keep containers closed to prevent moisture absorption and contamination. These products are moisture sensitive and packaged under a blanket of dry nitrogen. If a container is opened, re-blanket with dry nitrogen and then tightly reseal.

When stored at temperatures from 59-77°F (15-25°C), the resin and hardener will remain in useable condition for 6 months from date of shipping from Huntsman.

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**Caution:**

Huntsman Advanced Materials Americas Inc. maintains up-to-date Material Safety Data Sheets (MSDS) on all of its products. These sheets contain pertinent information that you may need to protect your employees and customers against any known health or safety hazards associated with our products. Users should review the latest MSDS to determine possible health hazards and appropriate precautions to implement prior to using this material. Copies of the latest MSDS may be requested by calling our customer service group at 888-564-9318 or emailing your request to [adhesives@huntsman.com](mailto:adhesives@huntsman.com).

**First Aid!**

Eyes and skin: Flush eyes with water for 15 minutes. Contact a physician if irritation persists. Wash skin thoroughly with soap and water. Remove and wash contaminated clothing before reuse.

Inhalation: Remove subject to fresh air.

Swallowing: Dilute by giving water to drink and contact a physician promptly. Never give anything to drink to an unconscious person.

**KEEP OUT OF REACH OF CHILDREN  
FOR PROFESSIONAL AND INDUSTRIAL USE ONLY**

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