

Advanced Materials

Araldite[®] 2042 A/B Polyurethane Adhesive

- **Rapid Cure**
- **High Strength**
- **Excellent Flexibility**
- **Convenient Mix Ratio**
- **Bonds a Wide Variety of Materials**

DESCRIPTION

Araldite[®] 2042 A/B polyurethane adhesive is a two-part, rapid-curing system that is specifically formulated for bonding plastics including polycarbonate, ABS, nylon, and ¹Metton[®] with minimal substrate preparation. Araldite[®] 2042 A/B polyurethane adhesive has also been used successfully for bonding materials with differing CTEs, e.g., nylon to stainless steel. Once cured, it features good environmental stability and impact resistance.

¹Metton is a registered trademark of Metton America, Inc.

TYPICAL PROPERTIES AS SUPPLIED

Property	Test Method	2042 A Resin	2042 B Hardener	2042 A/B Mixed
Color	Visual	White	Red	Pink
Specific gravity	ASTM D792	1.10	1.30	1.20
Viscosity, cP at 77°F (25°C)	ASTM D2393	50,000	20,000	50,000
Pot Life, 4 fl oz, at 77°F (25°C), min.	ASTM D2471	-	-	3

MIX RATIO

To 100 parts by weight of Araldite[®] 2042 B Hardener, add 80 parts by weight of Araldite[®] 2042 A Resin, or 1:1 by volume. Mix both components thoroughly for 2-3 minutes to ensure complete blending.

RECOMMENDED CURE SCHEDULES

Temperature	Handling Strength	Minimum Cure Time
77°F (25°C)	1 hour	6 hours
140°F (60°C)	30 minutes	60 minutes
212°F (100°C)	5 minutes	10 minutes

TYPICAL CURED PROPERTIES (Not for specification purposes)*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.

Property	Test Method	Test Values
Tensile lap shear, psi (MPa) cured 20min @ 212°F (100°C) Aluminum 1Metton®	ASTM D1002	1450 (10) 800 (5.5)
Hardness, Shore D	ASTM D2240	85
Ultimate Tensile Strength, psi (MPa)	ASTM D638	2100 (14.5)
Elongation, %	ASTM D638	250
Tg per DMA, °F (°C)	ASTM D4065	86 (30)
Coefficient of Thermal Expansion (in/in/°C) Below Tg Above Tg	ASTM E831	13.5 x 10 ⁻² 23 x 10 ⁻⁵

STORAGE

When stored in a dry place in their original sealed containers at a temperature within 36°F to 104°F (+2°C and +40°C) both components of Araldite® 2042 A/B have a 1 year shelf-life from date of shipment. Araldite® 2042 A/B should not be exposed to direct sunlight. The temperature of both components should be above 18°C (65°F) prior to mixing. These products are moisture sensitive and are packaged under a blanket of dry nitrogen. After opening a container, re-blanket with dry nitrogen and then tightly reseal containers.

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PRECAUTIONARY STATEMENT

Huntsman Advanced Materials Americas LLC 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.

First Aid!

Refer to MSDS as mentioned above.

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

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