

Araldite[®] 2042 A/B Polyurethane Adhesive

Product 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.

Features

- Rapid cure
- High strength
- Excellent flexibility
- Convenient mix ratio
- Bonds a wide variety of materials

Typical Properties*

Property	Test Method	Araldite [®] 2042 A	Araldite [®] 2042 B	Mixed System
Appearance	Visual	White	Red	Pink
Density, g/cm ³	ASTM D792	1.10	1.30	1.20
Viscosity at 25°C, cP	ASTM D2393	50,000	20,000	50,000
Pot life at 25°C, 4 fl. oz., min	ASTM D2471	-	-	3

*Properties are based on Huntsman test methods. Copies are available upon request

Processing

Mix Ratio

Product	Parts by weight	Parts by volume
Araldite [®] 2042 A Resin	80	100
Araldite [®] 2042 B Hardener	100	100

The temperature of both components should be above 18°C (65°F) prior to mixing. Mix both components thoroughly for 2-3 minutes to ensure complete blending.

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.

Typical Cure Cycles

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 Physical Properties

Unless otherwise stated, the data were determined with typical production batches using standard test methods. They are typical values only, and do not constitute a product specification.

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. Samples were cured 20 min @ 212°F.

Property	Test Method	Value
Tensile lap shear strength, psi (MPa) Aluminum Metton®	ASTM D1002	1,450 (10) 800 (5.5)
Coefficient of thermal expansion, in/in/°C Below T _g Above T _g	ASTM E831	13.5 x 10 ⁻⁵ 23 x 10 ⁻⁵
Glass transition temperature, T _g , °F (°C)	ASTM D4065	86 (30)
Elongation at tensile break, %	ASTM D638	250
Ultimate tensile strength, psi (MPa)	ASTM D638	2,100 (14.5)
Hardness, Shore D	ASTM D2240	85

Storage

Araldite® 2042 A/B Adhesive should be stored in a dry place, in the original sealed containers, at temperatures between 2°C and 40°C (36°F to 104°F). Under these storage conditions, the product has a shelf life of **1 year** (from date of shipment). The product should not be exposed to direct sunlight.

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.

Precautionary Statement

Huntsman Advanced Materials Americas LLC maintains up-to-date Safety Data Sheets (SDS) 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 SDS as mentioned above.

KEEP OUT OF REACH OF CHILDREN

FOR PROFESSIONAL AND INDUSTRIAL USE ONLY

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