

Advanced Materials

Araldite[®] 3112 Resin / Hardener 3112

RAPID, CLEAR, HIGH-STRENGTH EPOXY ADHESIVE

Description

Araldite[®] 3112 Resin and Hardener 3112 is a rapid-setting, two-component epoxy adhesive with a convenient 1:1 resin-to-hardener mix ratio. The product generates strong bonds on a wide variety of substrates in a short period of time. No special handling or application techniques are required.

Applications

Small part bonding/assembly
Rapid repairs
Potting

Advantages

Rapid setting.
Transparent bond line after curing.

Typical Properties

<u>Property</u>	<u>Test Method</u>	<u>Test Values⁽¹⁾</u>	
		<u>Araldite 3112 Resin</u>	<u>Hardener 3112</u>
Color/appearance	Visual	Water clear liquid	Light Yellow Liquid
Specific Gravity	ASTM D-792	1.17	1.12
Viscosity, cP @ 77°F (25°C)	ASTM D-2393	8,000–15,000	10,000-17,000

¹ Tested at 77°F (25°C)

Typical Mixed Properties

<u>Property</u>	<u>Test Method</u>	<u>Test Values⁽¹⁾</u>
Reaction Ratio (by volume)		100R/100H
Reaction Ratio (by weight)		100R/96H
Pot Life, minutes @ 77°F (25°C), 3.0 gram, total mass	ASTM D-2471	5.30-6.20
Hardness, shore A	ASTM D-2240	70

¹Tested @ 77°F (25°C)

Recommended Cure Schedules

Lap shear strength cure 24 hours at 77°F (25°C) on treated steel (RC #14) adherents, (ASTM D-1002)

<u>Cure at 77°F (25°C)</u>	<u>Time</u>	<u>Shear Strength⁽¹⁾</u> psi
Handling strength	25-30 minutes	170 psi
Ultimate strength	3 days	2558 psi

¹Tested @ 77°F (25°C)

Typical Cured Properties

Lap shear strength at different substrates curing 7 days at 77°F (25°C), (ASTM D-1002).

<u>Substrates</u>	<u>Lap Shear Strength¹, psi</u>
ABS	565
PMMA	441
PVC	441
PC	611
Primed Aluminum	2367

¹ Tested at 77°F (25°C)

Processing

Application of Adhesive

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

For the best results, the two surfaces being bonded should be free of oil, dirt, moisture and other such contaminants and should be slightly roughed or sands to remove the gloss.

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 steel, RC#14. The joint area was 0.5 x 1 inch (12.5 mm x 2.5 cm) in each case.

Storage and Shelf Life

ARALDITE® epoxy adhesive components should be stored in their original, sealed containers at room temperature. When stored at temperatures from 59-77°F (15-25°C), the resin and hardener will remain in useable condition for 18 months from date of shipping from Huntsman.

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.

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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