

Advanced Materials**Araldite® 1258 A/B Adhesive****ALUMINUM FILLED EPOXY PASTE ADHESIVE**

DESCRIPTION :

Araldite® 1258 A/B epoxy adhesive is a two-component, aluminum-filled paste. The system forms a bond that is often stronger than the materials being bonded. Araldite® 1258 A/B epoxy adhesive conforms to surfaces without heat or pressure, and hardens in 2-4 hours at room temperature.

Formulated to give a strong, durable bond when used with a variety of substrates, this adhesive is well suited for many industrial maintenance applications. It has been approved by the Armed Forces for making emergency repairs in the field.

APPLICATIONS :

Araldite® 1258 A/B epoxy adhesive can be used to rebuild machinery, to line wood or metal tanks. It can be used for general maintenance applications such as resetting and re-threading screws or bolts in stripped or worm holes and plugging cracks and holes in metal.

Araldite® 1258 A/B epoxy adhesive also is suitable for patching cement and concrete and for fastening loose bricks and stones in place. It can be used to repair plastic and conventional tools, build nesting fixtures and fill holes in castings. Other applications for the epoxy paste include repairing vacuum forms, air ducts and steam lines, radiators, cylinder drying tools, boiler jackets and other industrial equipment/parts.

ADVANTAGES :

Araldite® 1258 A/B epoxy adhesive is easy to thoroughly mix by hand for small batches. It bonds to steel, glass, porcelain, concrete and wood. In addition, it can be sanded, filed or machined, drilled or threaded with conventional tools.

TYPICAL PROPERTIES :

<u>Property</u>	<u>Test Method</u>	Test Values⁽¹⁾	
		<u>Resin</u>	<u>Hardener</u>
Color/Appearance	Visual	Light gray paste	Dark gray paste
Specific Gravity	ASTM D-792	1.53	1.56
Viscosity (cP) @ 77 °F (25 °C)	ASTM D-2393	> 1,000,000	> 1,000,000

TYPICAL MIXED PROPERTIES :

<u>Property</u>	<u>Test Method</u>	<u>Test Values⁽¹⁾</u>
Resin/Hardener Ratio (by weight)	ASTM D-2471	100/100
Resin/Hardener Ratio (by volume)		100/100
Pot Life (4 fl oz mass) @ 77 °F (25 °C)		23 min

CURE SCHEDULE :

<u>Temperature</u>	<u>Cure Time</u>
77 °F (25 °C)	6 hours
140 °F (60 °C)	30 min.
212 °F (100 °C)	10 min.

TYPICAL CURE PROPERTIES :**Pretreatment**

The strength and durability of a bonded joint are dependent on proper pretreatment of the surfaces to be bonded.

At the very least, joint surfaces should be cleaned with a good degreasing agent such as acetone or trichloroethylene, in order to remove all traces of oil, grease and dirt. Never use alcohol, gasoline or paint thinners.

The strongest and most durable joints are obtained by either mechanically abrading or chemically etching ("pickling") the degreased surfaces. Abrading should be followed by a second degreasing treatment.

Application of Adhesive

Apply the resin/hardener mix with a spatula to the pretreated and cry 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 ensures 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 inch x 1 inch (12.5 mm x 2.5 cm) in each case.

TYPICAL CURE PROPERTIES :**Lap shear strength
Effect of Cure Time**

<u>Cure Temperature °C (°F)</u>	<u>Cure Time</u>	Shear Strength 77 °F (25 °C)	
		<u>psi</u>	<u>Mpa</u>
77 °F (25 °C)	6 hours	2560	18
	24 hours	2700	19
	7 days	2840	20

Effect of Test Temperature

(Load applied 10 minutes after specimens reach test temperature)

<u>Cure Cycle</u>	<u>Test Temperature</u>	Shear Strength 77 °F (25 °C)	
		<u>psi</u>	<u>Mpa</u>
7 days @ 77 °F (25 °C)	-76 °F (-60 °C)	2280	16
	77 °F (25 °C)	2840	20
	140 °F (60 °C)	1140	6
	176 °F (80 °C)	330	2

Effect of Tropical Exposure

120 °F (49 °C) / 95 % R.H. Exposure

<u>Cure Cycle</u>	<u>Exposure Time</u>	Shear Strength 77 °F (25 °C)	
		<u>psi</u>	<u>Mpa</u>
7 days @ 77 °F (25 °C)	0 days	2840	20
	30 days	3410	24
	90 days	3560	25
	120 days	3130	22

Tested @ 77 °F (25 °C), unless otherwise noted.

CAUTION :

Huntsman Advances Materials Americas Inc. maintains up-to-date Material Safety Data Sheet (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 800-367-8793 or emailing your request to adhesives_group@huntsman.com

To protect against any potential health risks presented by our products, the use of proper personal protective equipment (PPE) is recommended. Eye and skin protection is normally advised. Respiratory protection may be needed if mechanical ventilation is not available or is insufficient to remove vapors.

For detailed PPE recommendations and exposure control options consult the product MSDS or a Huntsman EHS representative.

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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