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Product Data

FASTWELDTM 10 A/B

FAST-SETTING EPOXY ADHESIVE

DESCRIPTION: FASTWELD 10 A/B epoxy adhesive is a rapid-setting, two-component paste offering a convenient one-to-one mixing ratio by volume or weight. FASTWELD 10 A/B epoxy adhesive produces strong bonds in a very short period. It is especially suited for bonding small parts and for repair work.

APPLICATIONS: No special techniques are required to work with this adhesive. Mix the two components thoroughly on a clean, dry surface. The bonding surface can be wood, metal, plastic or cardboard, among others. For best results, the two surfaces being bonded should be free of oil, dirt, moisture, etc. and should be slightly roughened or sanded to remove gloss.

TYPICAL PROPERTIES:	<u>Property</u>	<u>Test Method</u>	<u>Test Values⁽¹⁾</u>	
			<u>Resin</u>	<u>Hardener</u>
	Color/appearance	Visual	Black paste	White paste
	Specific Gravity	ASTM D-792	1.48	1.44
	Viscosity, cP @ 75°F (23°C)	ASTM D-2393	260,000	160,000

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
	Viscosity, cP @ 77°F (25°C)		250,000
	Pot Life, minutes @ 77°F (25°C) (2 fl oz mass)		3-4

CURE SCHEDULES:	<u>Temperature</u>	<u>Cure Time</u>
	77°F (25°C) (Heat cure is not recommended)	4 hrs.

TYPICAL CURED 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 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 ensures proper cure.

Standard Test Specimens

Unless otherwise stated, the figures given below were all determined by testing standard specimens made up by lap-joint 4-inch x 1-inch x 0.06-inch (10-cm x 2.5-cm x 1.5-mm) strips of degreased and 100-grit abraded aluminum. The joint area was 0.5 x 1 inch (12.5 mm x 2.5 cm) in each case.

**TYPICAL CURED
PROPERTIES:**
(continued)

**Lap Shear Strength
Effect of Cure Time and Temperature**

<u>Cure Temperature °F (°C)</u>	<u>Cure Time</u>	Test Values @ 77°F (25°C)	
		<u>psi</u>	<u>MPa</u>
41°F (5°C)	1 hr.	1420	10
	4 hrs.	1560	11
	24 hrs.	1710	12
77°F (25°C)	30 min	1710	12
	1 hr.	2130	15
	4 hrs.	2840	20
	24 hrs.	2840	20

Effect of Test Temperature

(Load applied 10 minutes after specimens reach test temperature.)

<u>Cure Cycle</u>	<u>Test Temperature °F (°C)</u>	Shear Strength @ 77°F (25°C)	
		<u>psi</u>	<u>MPa</u>
24 hrs. @ 77°F (25°C)	-40°F (-40°C)	1560	11
	77°F (25°C)	2840	20
	104°F (40°C)	2420	17
	140°F (60°C)	1140	8

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>
24 hrs. @ 77°F (25°C)	0 days	2840	20
	10 days	1710	12
	30 days	1000	7

Effect of Heat Aging

Cured 24 hrs @ 77°F (25°C)

<u>Aging Temperature °F (°C)</u>	<u>Exposure Time</u>	Shear Strength @ 77°F (25°C)	
		<u>psi</u>	<u>MPa</u>
140°F (60°C)	0 days	2840	20
	10 days	2840	20
	30 days	2990	21
	60 days	2560	18

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

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 800-367-8793 or emailing your request to adhesives_group@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

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