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Product Data

ARALDITE[®] 8680 Resin Hardener 8685 HIGH-STRENGTH BLACK POLYURETHANE ADHESIVE

DESCRIPTION

Araldite 8680 resin/Hardener 8685 polyurethane adhesive is a two-part, black system specifically formulated for bonding plastics including polycarbonate, ABS, nylon and Telene^{®*} as well as painted metals. It features good environmental stability and impact resistance.

APPLICATIONS

- Bonding:
- Telene[®]
 - ABS, polycarbonate and other plastics
 - SMC and FRP
 - Primed metals

ADVANTAGES

- Tough and resilient
 - Convenient mix ratio
 - Bonds a wide variety of materials
 - Instant thixotropy on mixing
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* Telene is a registered trademark of Cymetech LLC

MIX RATIO

By Weight: 80 to 100 Resin to Hardener
 By Volume: 100 to 100 Resin to Hardener

TYPICAL PHYSICAL PROPERTIES

Tested @ 77°F(25°C)

<u>Property</u>	<u>Criteria</u>	<u>ASTM Test Method</u>	<u>Test Value</u>
Appearance	Resin	Visual	White thixotropic liquid
Specific Gravity	Hardener	D-792	Black liquid
	Resin		1.15
Viscosity, cP @ 77°F (25°C)	Hardener	D-2393	1.35
	Resin		48,000
Gel Time, min. @ 77°F (25°C)	Hardener	D-2471	20,000
	90 gram mass		8-10

CURING SCHEDULE

<u>Temperature</u>	<u>Handling Strength⁽¹⁾</u>	<u>Minimum Cure Time</u>
77°F (25°C)	2 hours	12 hours
110°F(43°C)	30 minutes	8 hours
140°F(60°C)	15 minutes	90 minutes

⁽¹⁾ Time to reach 200 psi lap shear strength

**TYPICAL CURED
PROPERTIES**

Tested @ 77°F(25°C) unless otherwise noted⁽¹⁾
Not for specification purposes

<u>Property</u>	<u>Test Method</u>	<u>Test Values</u>
Hardness, Shore D (A)	ASTM D-2240	40 (85)
Ultimate Tensile Strength, psi (MPa)	ASTM D-638	2100 (14.5)
Elongation, %	ASTM D-638	250
Tg per DMA, °F (°C)	ASTM D-4065	122(50)
Coefficient of Thermal Expansion, in/in/°C	ASTM D-831	7.5 x 10 ⁻⁵
Lap Shear Strength, psi (MPa)		
Effect of Substrate		
Aluminum ⁽²⁾	ASTM D-1002	2900 (20)
Telene ⁽³⁾	SAE J1525	980 (6.8)
SMC	SAE J1525	520 (3.6)
Effect of Test Temperature		
<i>(Tested on SMC)</i>		
-40°F (-40°C)		550 (3.8)
73°F (23°C)		525 (3.6)
180°F (82°C)		65 (0.4)

⁽¹⁾ Unless otherwise noted, cured 7 days at
77°F (25°C)

⁽²⁾ Etched per ASTM D2651, Cured 12 hours at
77°F (25°C) followed by 30 minutes at 275°F
(135°C)

⁽³⁾ Abraded plus solvent wipe

NOTE:

The test data and results set forth herein are based on laboratory work and/or field testing and does not necessarily indicate results that the buyer or user will attain. Full-scale testing and product performance are the responsibility of the buyer and user.

**STORAGE/
SHELF LIFE:**

Araldite polyurethane adhesive components should be stored in their original, sealed containers at room temperature. Keep containers closed to prevent moisture absorption and contamination. These products are moisture sensitive and packaged under a blanket of dry nitrogen. If a container is opened, re-blanket with dry nitrogen and then tightly reseal.

When stored at temperatures from 59-77°F (15-25°C), the resin and hardener will remain in useable condition for 6 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 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

FOR PROFESSIONAL AND INDUSTRIAL USE ONLY

IMPORTANT LEGAL NOTICE:

Sales of a referenced product ("Product") are subject to the general terms and conditions of sale of Huntsman Advanced Materials Americas Inc. ("Huntsman").

WARRANTY: Huntsman warrants to the Buyer that the Product will conform to the published specifications for that Product at the time of manufacture.

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WARNING: Technical data and results are based upon tests under controlled laboratory conditions and must be confirmed by Buyer by testing for its intended conditions of use. The Product has not been tested for, and therefore is not recommended or suitable for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended or likely, or for uses for which implantation within the human body is intended, and Huntsman assumes no liability for any such uses.

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