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Advanced Materials

Araldite® 8680 Resin / Hardener 8685 Adhesive

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®[1] as well as painted metals. It features excellent environmental stability and impact resistance.

APPLICATIONS :

- Telene®
- ABS, polycarbonate and other plastics
- SMC and FRP
- Primed metals

ADVANTAGES :

- Tough and resilient
- Convenient miw ratio
- Bonds a wide variety of materials
- Instant thixotropy on mixing

MIX RATION :

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

TYPICAL PHYSICAL PROPERTIES :

Tested @ 77 °F (25 °C)

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

[1] Telene is a registered trademark of Cymetech LLC

CURING SCHEDULE :

Temperature	Handling Strength[1]	Minimum Cure Time
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

Property	Test Method	Test Values
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	7.5×10^{-5}
Lap Shear Strength, psi (MPa)		
Effect of Substrate		
Aluminum[2]	ASTM D-1003	2900 (20)
Telene[3]	SAE J1525	980 (6.8)
SMC	SAE J1525	520 (3.6)
Effect of Test Temperature		
(Tested on SMC)		
-40 °F (-40 °C)		550 (3.8)
74 °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 result 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 :

Araldite® 8680 Resin / Hardener 8685 polyurethane adhesive should be stored in a dry place, in their original, sealed container at temperatures between +2°C and +40°C (+36°F and 104°F). Under these storage conditions, the shelf life is 1 year. The product should not be exposed to direct sunlight.

If stored below 60°F, the adhesive should be brought to 60°F – 77°F and conditioned at this temperature for some time prior to use.

PRECAUTIONARY STATEMENT :

Huntsman Advanced Materials Americas LLC 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.

First Aid!
Refer to MSDS as mentioned above.

KEEP OUT OF REACH OF CHILDREN

FOR PROFESSIONAL AND INDUSTRIAL USE ONLY

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