

Advanced Materials**Araldite[®] AV 8531 Resin
Hardener HV 8531 Adhesive****EPOXY ADHESIVE PASTE**

DESCRIPTION :

Araldite[®] AV 8531 Resin/Hardener HV 8531 epoxy adhesive is a two-component paste designed for bonding sheet molding compound. Araldite[®] AV 8531 Resin/Hardener HV 8531 epoxy adhesive develops handling strength rapidly in a heated fixture. Only a dry wipe is required for SMC surface preparation before bonding.

APPLICATIONS :

- Sheet Molding Compound
- Plastics
- Metals

ADVANTAGES :

- Fast fixture time
- Good flexibility
- Minimal surface preparation required

TYPICAL PROPERTIES :

	Resin	Hardener
Color/Appearance	Black paste	Cream paste
Specific gravity @ 77 °F (25 °C)	1.33	1.27
Brookfield Viscosity, cP @ 77 °F (25 °C) (Spindle # @ 10 rpm)	320,000	304,000
Solids content, %	100	100

PROCESSING PROPERTIES :**Resin/Hardener**

Ratio	(by weight)	100/187
	(by volume)	100/200
Pot Life, minutes @ 77 °F (25 °C) (100 gram. Mass)		40
Sag resistance, inch (mm) (0.23 in/6mm bead) @77 °F (25 °C)		0 (0)
Weldability		Good
Sandability		Fair
Cleaning/flushing solvent		Methylene chloride

TYPICAL BULK PROPERTIES :

Glass transition temperature, °F (°C)	185 (85)
Young's modulus, psi (Mpa) (ASTM D-638)	115,000 (793)
Shear modulus, psi (Mpa) @ 77 °F (25 °C) (Rheometrics RDA-700)	53,000 (366)
Shore D hardness	66
Elongation, % (ASTM D-638)	55
Coefficient of linear expansion, in/in/°C (by TMA)	16.1 x 10 ⁻⁵
Ultimate tensile strength, psi (Mpa) (ASTM D-638)	2,000 (13.8)

CURING CONDITION :

<u>Temperature</u>	<u>Handling Strength</u>	<u>Minimum Cure Time</u>
77 °F (25 °C)	4 hours	48 hours
250 °F (120 °C)	75 seconds	10 minutes

CURED PROPERTIES :

Cured adhesive properties evaluated on SMC (automotive grade, dry wiped). Unless otherwise stated, lap shear testing determined with 0.030 inch (0.76 mm) bond line thickness and 0.5 x 1 inch (12.5 mm x 2.5 cm) joint area.

Lap Shear Strength (ASTM D-1002)**Effect of Test Temperature**

Substrate	Cure Cycle	Test Temperature	Shear Strength	
			Psi	MPa
SMC	1 hour @ 250 °F (120 °C)	-22 °F (-30 °C)	580	4
		77 °F (25 °C)	470	3
		180 °F (82 °C)	360	2.5

Effect of Bond line Thickness

Substrate	Cure Cycle	Bond line Thickness	Shear Strength	
			Psi	MPa
SMC	1 hour @ 250 °F (120 °C)	0.030 in/0.76 mm	470	3
		0.060 in/1.52 mm	280	2
		0.125 in/3 mm	200	1.4
		0.250 in/6 mm	140	1
		0.500 in/12.7 mm	100	0.7

Effect of Environmental Conditioning

Substrate	Cure Cycle	Environmental	Shear Strength	
			Psi	MPa
SMC	1 hour @ 250 °F (120 °C)	Initial	470	3
		Salt spray (500 hrs.)	320	2
		Water soak (7 days)	360	2.5
		Scab cycle (20 cycles)	320	2
		T-peel Strength, Pli (N/mm) (ASTM D-1876)	16 (91.4)	

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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