

## Araldite® AV 8504 Resin / TDT 177-27 Hardener

### Product Description

Araldite® AV 8504 Resin / TDT 177-27 Hardener epoxy adhesive is a two-component system which provides good sag resistance, high bond strength and toughness. It can be cured at room temperature or elevated temperatures. Araldite® AV 8504 Resin / TDT 177-27 Hardener epoxy adhesive provides good adhesion properties to a wide variety of substrates and resilient bondlines once fully cured, and is particularly useful in panel pin bonding.

### Features

- Sag Resistant
- Fast Curing
- User friendly mix ratio
- Suitable for panel pin bonding

### Typical Properties\*

Property	Araldite® AV 8504 Resin	TDT 177-27 Hardener	Mixed	Test Method
Color	Translucent white	Black	Black	Visual
Viscosity	Paste	Paste	Paste	Visual
Specific Gravity	1.19	1.10	1.17	ASTM D792
Sag resistance at 25°C, in (cm)	Pass 1.5 (3.8)	Pass 1.5 (3.8)	-	ASTM D2730
Gel time at 25°C, 150 g, min	-	-	15	ASTM D2741

\*Typical properties are based on Huntsman's test methods. Copies are available upon request.

## Processing

### Mix Ratio

Primer Formulation	Parts by weight	Parts by volume
Araldite® AV 8504 Resin	100	100
Hardener 177-27	50	50

The strength and durability of a bonded joint are dependent on proper treatment of the surfaces to be bonded. At the very least, joint surfaces should be cleaned with a good degreasing agent such as acetone or other appropriate degreasing agent in order to remove all traces of oil, grease and dirt. Alcohol, gasoline or paint thinners should never be used. 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.

The removal of cured adhesive residues is a tedious and time-consuming operation. All tools and equipment should preferably be cleaned with hot soapy water before adhesives residues have had time to cure. If organic solvents such as acetone have to be used for cleaning, the operators should take all the appropriate precautions and wear some suitable personal protective equipment to prevent any contact with skin and eyes.

### Recommended Cure Cycle

Temperature	Minimum cure time
77°F (25°C)	15 hours
140°F (60°C)	30 minutes
212°F (100°C)	10 minutes

## Typical Physical Properties

Unless otherwise stated, the data were determined with typical production batches using standard test methods. They are typical values only, and do not constitute a product specification.

Value were obtained by testing standard specimens at 77°F (25°C) unless otherwise noted.

Property	Value	Test Method
Hardness, Shore D	80	ASTM D2240
Glass transition temperature, T <sub>g</sub> , °F (°C)	167 (75)	ASTM E1545
Coefficient of thermal expansion, in/in/°F	5.40 x 10 <sup>-5</sup>	ASTM E831
Lap shear strength at 77°F (25°C), psi (MPa)	1850 (12.7)	ASTM D1002

### Effect of Cure Conditions and Test Temperature on Lap Shear Strength

Cure Temp. °F (°C)	Cure Time	Lap Shear Strength, psi (Mpa)
68 (20)	8 h	850 (5.9)
68 (20)	15 h	1,420 (9.8)
68 (20)	24 h	1,700 (11.7)
140 (60)	15 min	1,280 (8.8)
140 (60)	30 min	1,850 (12.7)
212 (100)	10 min	1,700 (11.7)
212 (100)	15 min	2,130 (14.7)

Cure Cycle	Test Temp. °F (°C)	Lap Shear Strength, psi (Mpa)
30 min at 140°F	-4 (-20)	1,560 (11)
30 min at 140°F	68 (20)	1,850 (12.7)
30 min at 140°F	140 (60)	1,280 (8.8)
30 min at 140°F	212 (100)	570 (3.9)

### Storage

**Araldite® AV 8504 Resin / TDT 177-27 Hardener Adhesive** is available in 50 ml and 200 ml twin cartridges. Individual components are also available in 5- gallon bulk containers. When supplied under Huntsman standard certification, and stored in a dry location in their original sealed containers at a temperature within 2 to 40°C (36°F to 104°F), the products have a shelf-life of **18 months** (from date of manufacture). Tightly reseal containers after each use. The products should not be exposed to direct sunlight.

### Precautionary Statement

Huntsman Advanced Materials Americas LLC maintains up-to-date Safety Data Sheets (SDS) 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 SDS as mentioned above.

**KEEP OUT OF REACH OF CHILDREN**

**FOR PROFESSIONAL AND INDUSTRIAL USE ONLY**

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