

## Araldite<sup>®</sup> HM PUR 7 US

### Product Description

Araldite<sup>®</sup> HM PUR 7 US is a long open, assembly time moisture curing hot-melt polyurethane adhesive. The adhesive is solid at ambient conditions. It is applied in molten form and cures in the presence of moisture to form a tough, durable bond. Araldite<sup>®</sup> HM PUR 7 US bonds to a wide variety of substrates, but does require that at least one of the substrates be gas permeable. Typical substrates include wood and wood products, most foams, primed metals, FRP, and other polymeric substrates with Dyne levels greater than 38 dynes. At 3 mil thickness, the adhesive transfers to the opposing substrate with at least 3 minutes of assembly time, prior to nipping.

### Features

- 100% solids
- Roll coater stable
- Seven minute assembly time
- Excellent green strength

### Typical Properties\*

Property	Araldite <sup>®</sup> HM PUR 7 US	
Appearance	Whitish	
Brookfield Viscosity at 250°F (121°C), Sp 27, 20 RPM, cP	~14,000	
Percent solids	100	
Open time, wood-wood, 4 mil, min	7	
Green Strength at 77°F (25°C), psi	5 min	8
	10 min	23
	15 min	56

\*Properties are based on Huntsman test methods. Copies are available upon request.

### Processing

#### Pretreatment

In order to obtain optimal adhesion, all substrates must be free of oil, grease, lubricants, dust, dirt, and any other surface contaminations.

### Application of adhesive

The adhesive being solid at room temperature, Araldite® HM PUR 7 US must be transferred from the drum through the use of a heated follower plate pump. The lines between the pump and the application device must also be heated to prevent solidification. Araldite® HM PUR 7 US is typically applied using a heated roll coater. Typical application temperatures vary between 250°F - 275°F (121°C - 135°C). The adhesive is applied to one surface with deposition rates between 10 to 12 grams per square foot; however, deposition can vary depending on the porosity of the substrates. Overhead humidification must be present to provide necessary moisture for curing.

Once the substrate is coated with adhesive, mate the coated substrate with the other part, and immediately nip the bonded structure in a roll coater with at least 40 psi of down pressure. The bonded part may be moved but should not be processed until the next day.

### Roll coater clean up

Reverse roll coater and dump off excess adhesive. Place in forward and add HMPUR Cleaner to the nips(s) and allow cleaning for at least three minutes. Reverse and dump the cleaner. Add more cleaner, allow cleaning for at least three minutes, and dump the cleaner again. Open the rolls at least 0.25 inches and dry with a clean cloth. Extreme care must be taken to only wipe the side away from the nip.

## 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. Unless a different specification is given, the figures below were all determined by testing standard specimens made by lap-joining 4 in x 1 in (11.4 cm x 2.5 cm). The thickness of plastic substrates is typically 0.12 in (3 mm) and aluminum substrate is 0.063 in (1.6 mm) thick. The joint area was 1 in x 1 in (2.5 cm x 2.5 cm) in each case.

Property	Test Method	Value
Lap shear strength, psi	ASTM D1002	
Aluminum		310
Acrylic		910
Maple Wood		300
PVC		1,000
SMC		420
ABS		450
Tear strength, pli	ASTM D624	280
Tensile strength, psi	ASTM D412	890
Tensile modulus, ksi	ASTM D412	18
Elongation, %	ASTM D412	360
Hardness, Shore D	ASTM D2240	42

## **Storage**

**Araldite® HM PUR 7 US** should be stored in a dry place, in the original sealed containers, at temperatures between 15°C and 25°C (59°F and 77°F). Under these storage conditions, the product has a shelf life of **6 months** (from date of manufacture). The product should not be exposed to direct sunlight. Never reuse partial drums.

## **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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