

## Araldite<sup>®</sup> HM PUR 3 US

### Product Description

Araldite<sup>®</sup> HM PUR 3 US is a medium-fast, 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 3 US bonds to a wide variety of substrates, but does require that at least one of the substrates be permeable to moisture vapor. Typical substrates include wood and wood products, most foams, primed metals, FRP, and other plastics 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
- Odorless
- Aggressive Tack

### Typical Properties\*

Property	Araldite <sup>®</sup> HM PUR 3 US
Appearance	Tan to amber
Brookfield Viscosity at 121°C, Sp 6, 10 RPM, cP	10,000 - 12,000
Percent solids	100
Open time, wood-wood, 3-mil	3

\*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 3 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 3 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.

### Equipment maintenance

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		415
Acrylic		836
Maple Wood		894
PVC		736
SMC		620
ABS		650
Tear strength, pli	ASTM D624	168
Tensile strength, psi	ASTM D412	861
Tensile modulus, psi	ASTM D412	12
Elongation, %	ASTM D412	243
Hardness, Shore D	ASTM D2240	50

### Storage

**Araldite® HM PUR 3 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**

### Important Legal Notice

Sales of the product described herein ("Product") are subject to the general terms and conditions of sale of either Huntsman Advanced Materials LLC, or its appropriate affiliate including without limitation Huntsman Advanced Materials (Europe) BVBA, Huntsman Advanced Materials Americas Inc., or Huntsman Advanced Materials (Hong Kong) Ltd. ("Huntsman"). The following supercedes Buyer's documents.

Huntsman warrants that at the time and place of delivery all Products sold to Buyer shall conform to the specifications provided to Buyer by Huntsman.

While the information and recommendations included in this publication are, to the best of Huntsman's knowledge, accurate as of the date of publication, NOTHING CONTAINED HEREIN (EXCEPT AS SET FORTH ABOVE REGARDING CONFORMANCE WITH SPECIFICATIONS PROVIDED TO BUYER BY HUNTSMAN) IS TO BE CONSTRUED AS A REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, NONINFRINGEMENT OF ANY INTELLECTUAL PROPERTY RIGHTS, OR WARRANTIES AS TO QUALITY OR CORRESPONDENCE WITH PRIOR DESCRIPTION OR SAMPLE, AND THE BUYER ASSUMES ALL RISK AND LIABILITY WHATSOEVER RESULTING FROM THE USE OF SUCH PRODUCT, WHETHER USED SINGLY OR IN COMBINATION WITH OTHER SUBSTANCES.

No statements or recommendations made herein are to be construed as a representation about the suitability of any Product for the particular application of Buyer or user or as an inducement to infringe any patent or other intellectual property right. Buyer is responsible to determine the applicability of such information and recommendations and the suitability of any Product for its own particular purpose, and to ensure that its intended use of the Product does not infringe any intellectual property rights.

The Product may be or become hazardous. The Buyer should obtain Material Safety Data Sheets and Technical Data Sheets from Huntsman containing detailed information on Product hazards and toxicity, together with proper shipping, handling and storage procedures for the Product, and should comply with all applicable governmental laws, regulations and standards relating to the handling, use, storage, distribution and disposal of, and exposure to the Product. Buyer shall also take all steps necessary to adequately inform, warn and familiarize its employees, agents, direct and indirect customers and contractors who may handle or be exposed to the Product of all hazards pertaining to and proper procedures for safe handling, use, storage, transportation and disposal of and exposure to the Product, and the containers or equipment in which the Product may be handled, shipped or stored.

**Araldite** is a registered trademark of Huntsman LLC or an affiliate thereof in one or more, but not all countries.

© 2015 Huntsman Advanced Materials Inc.

#### Main Offices:

**Huntsman Corporation**  
10003 Woodloch Forest Dr  
The Woodlands, TX 77380  
888-564-9318

**Huntsman Advanced Technology Center**  
8600 Gosling Rd.  
The Woodlands, TX 77381  
281-719-7400