

Huntsman Advanced Materials Americas Inc.

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RenPaste[®] 4618-1 RESIN

Ren[®] 4618-1 HARDENER

EPOXY SEAMLESS MODELING PASTE

DESCRIPTION

RenPaste[®] 4618-1 epoxy resin and Ren[®] 4618-1 hardener seamless modelling paste is designed for building large, accurate models and plugs for the marine and aerospace industries. The paste is easy to dispense onto an undersized core in layers of 0.4 to 1.0 inch thick using meter/mix equipment. After curing for 48 hours at room temperature, RenPaste 4618-1 epoxy seamless modeling paste can be CNC machined to a fine finish.

APPLICATIONS

Production of models and plugs for the marine and aerospace industries.

ADVANTAGES

Quick marine and aerospace model/plug buildup
1.5-inch (38mm) thickness layer in one application
Low exotherm and shrinkage
Virtually odorless during application and milling
Room-temperature curing; machineable after 2 days
Easy-to-machine formulation, producing a fine, void-free, seamless surface
Low density with good dimensional stability
Epoxy-based

MIX RATIO

4618-1R/4618-1H	By Weight	100:50	Resin to Hardener
4618-1R/4618-1H	By Volume	100:50	Resin to Hardener

TYPICAL HANDLING Tested @ 77°F(25°C)
PROPERTIES

<u>Property</u>	<u>Criteria</u>	<u>Test Method</u>	<u>Test Value</u>
Color	Resin	Visual	Light Gray
	Hardener		Off-White
	Cured		Light Gray
Density, lbs/ft ³ (g/cm ³)	Resin	ASTM D-792	56 (0.9)
	Hardener		56 (0.9)
Gel Time, minutes at 77°F (25°C)	1.5 in. (38mm)	ASTM D-2471	180-240

NOTE: These physical properties are reported as typical test values obtained by the Huntsman Advanced Materials laboratories. If assistance is needed in establishing product specifications, please consult with the Huntsman Advanced Materials Quality Control Department.

PROCESSING: Before beginning, ensure that the undersized form is strong, stable, clean and free of loose material. Apply paste as a single layer up to 1.5 in. (38mm) in thickness using suitable meter/mix equipment.

RECOMMENDED CURE SCHEDULE

<u>Temperature</u>	<u>Time</u>
77°F (25°C)	24 hours

TYPICAL CURED PROPERTIES

Tested @ 77°F(25°C) unless otherwise noted.
 Not for specification purposes.

<u>Property</u>	<u>Test Method</u>	<u>Test Values</u>
Density, lb./ft. ³ (g.cm ³)	ASTM D-792	56 (0.90)
Hardness, Shore D	ASTM D-2240	76
Ultimate Flexural Strength, psi (MPa)	ASTM D-790	5,220 (36)
Deflection Temperature, °F (°C) at 264 psi (1.8 MPa)	ASTM D-648	122 (50)
Tg per DMA, E' onset, °F (°C)	ASTM D-4065	137 (58)
Tg per DMA, E' peak, °F (°C)	ASTM D-4065	159 (71)
Ultimate Compressive Strength, psi (MPa)	ASTM D-695	9,280 (64)
Coefficient of Thermal Expansion, -30°C to +30°C, in./in./°C	ASTM D-3386	30x10 ⁻⁶
Linear Shrinkage, Mold #1**, in./in. (mm/mm)	Huntsman Method*	<0.001 (<1.0)

* Test sample: 1.6 in. x 2 in. x 39 in. (41mm x 51mm x 99cm), free standing

**STORAGE/
SHELF LIFE:**

Epoxy resins and hardeners should be stored in a dry place in their original, sealed containers at temperatures from 60-100°F (16-38°C). Material temperatures should be above 65°F (18°C) when mixing. After use, tightly reseal containers.

Under these conditions, 4618-1 epoxy resins and hardeners will remain useable for 6 months from date of shipping from Huntsman.

CAUTION:

Huntsman Advanced Materials Americas Inc. 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. 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.

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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