

N109 W13300 ELLSWORTH DRIVE GERMANTOWN, WI 53022  
262-253-5900 FAX 262-253-5919

**DESCRIPTION:**

*ResinLab® AR4305HP Cream* is a methacrylate-based adhesive used for general purpose bonding of a wide variety of materials in industrial applications. It cures at room temperature and forms high strength durable bonds with consistent bond lines to plastics, composites, metals, ceramics, and other durable surfaces. In most applications surface preparation, primers, and wipes are not needed for bonding. It has excellent adhesion to as received metals such as aluminum, stainless, galvanized, and plated steels. The cure time was designed for high speed manufacturing processes where fast fixturing is required. It contains adhesion promoters to enhance performance on hard to bond materials such as nylon, chrome, and rubber.

*AR4305HP Cream* is easily dispensed from packaged cartridges or with commercial dispensing equipment as a non-sag, creamy gel, with no stringing. The product was designed to be used with static mixer tubes and has a balanced viscosity between parts. There are no abrasive fillers or extenders to reduce performance or cause wear in dispensing equipment. It is a fast curing product with a 5-minute open time and fixture within 10 minutes at room temperature.

*AR4305HP Cream* exhibits good resistance to commonly encountered service environments and chemicals such as boiling water, salt water, salt fog, fuels, antifreeze, hydraulic and cutting oils. Resistance to specific chemicals and environments must be tested by the end user to ensure the adhesive is compatible to the substrate and environment. Long term exposure to solvents, aldehydes, ketones and low molecular weight aromatics is not recommended.

**TYPICAL PROPERTIES:**

All properties given are at 25 °C unless otherwise noted.

<b>Property:</b>	<b>Value:</b>	<b>Test Method or Source:</b>
<b>Color Part A</b>	Off White	Visual
<b>Color Part B</b>	Amber	
<b>Color Mixed</b>	Light Amber	
<b>Mix Ratio</b>	Part A to Part B	Calculated
<b>By weight</b>	1 to 1	
<b>By volume</b>	1 to 1	
<b>Viscosity – Part A</b>	140,000 cps	Brookfield Viscosity Spindle TD 2.5 rpm
<b>Viscosity – Part B</b>	150,000 cps	
<b>Viscosity – Mixed</b>	150,000 cps	
<b>Work Time</b>	5 minutes	Observed, dependent on specific applications and materials being bonded.
<b>Fixture Time</b>	10 minutes	Observed, dependent on specific applications and materials being bonded.
<b>Peak Exotherm</b>	110 °C to 116 °C in 11-13 minutes	
<b>Gap Filling</b>	To 0.125 inches	
<b>Hardness</b>	70-75 Shore D	
<b>Tensile Properties:</b>		
<b>Elongation</b>	10% (estimated)	
<b>Tensile Shear Strength:</b>		ASTM D1002, commercial stock cut 1x4 laps. No surface prep.
<b>Steel</b>	>4,000 psi	
<b>Fiberglass</b>	Stock failure	
<b>PVC</b>	Stock failure	
<b>SMC</b>	Stock failure	

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<b>Peel Strength:</b>		ASTM D1876
<b>Steel</b>	20 pli	
<b>Impact Strength, Auto Side Impact:</b>		This product can go through one paint bake cycle of 375 °F/190 °C for 20 minutes with no significant loss in strength.
<b>Steel</b>	6.78 J/in <sup>2</sup>	
<b>Aluminum</b>	3,450 psi	
<b>ABS</b>	Stock failure	
<b>PMMA</b>	Stock failure	
<b>Gelcoat</b>	Stock failure	
<b>Flashpoint</b>	10.5 °C/51 °F	LCC
<b>Service Temperature</b>	-51 °C to 121 °C**	

\*\* Temperature Rating is based on average design requirements and is not intended as a guarantee of suitability for all applications operating at that temperature.

#### **INSTRUCTIONS:**

1. Bring both components to room temperature prior to mixing. All surfaces must be clean, dry, dust and grease free. A light abrasion is recommended for best bonding.
2. Use in a well-ventilated area, read the SDS prior to use. Contact with copper, zinc, brass, or other alloys containing these materials must be strictly prevented. All non-metallic seals and gaskets should be fabricated from Teflon® or UHMW polyethylene-based materials.
3. Cartridge format: Mixer should be attached keeping the cartridge vertical and any air pocket purged this way. After the mixer contains material, the mixer tip can be dropped to dispense pre-bleed amount. Attach a new static mixer with each cartridge, then pre-bleed the first 3 inches of dispensed material or until a uniform color is obtained. Maintain adequate velocity during dispensing to ensure complete mixing.
4. Bulk format: weigh and mix parts A and B accurately and thoroughly, scraping sides of container often. Do not pour from mixing container, transfer to a new container as residual unmixed material may cause a tacky spot on the surface of the casting. Maintain adequate velocity during dispensing to ensure complete mixing.
5. Allow to cure undisturbed until product is fully gelled or tack-free to the touch.
6. Clean up uncured resin with suitable organic solvent such as MEK, acetone or other organic solvent.

#### **SHELF LIFE AND STORAGE:**

6 months DOP at 25 °C or below  
Store in a cool place, away from heat, sparks and open flame.  
Do not freeze.