

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

DESCRIPTION:

Resinlab® AR4315HP is a 1:1 mix methacrylate-based structural adhesive formulated to bond almost all engineered thermoplastics, thermosets, composites, and metal structural elements together in any combination. It has excellent adhesion to as-received metal surfaces including aluminum, stainless and plated steels, and forms tough, high strength bonds without surface preparation, primers or chemical wipes. It contains special adhesion promoters to enhance performance on hard to bond materials such as nylon, chrome and rubber. It features a medium cure time for assembly flexibility to allow for positioning and multiple operations, but provides for faster fixturing. AR4315HP has outstanding durability and environmental resistance to many common industrial solvents, fuels, lubricants and environmental conditions. This product is formulated as a non-sag, creamy gel with matched viscosity for both parts, and is easy to dispense through static mixer tubes and other dispensing equipment.

Process and performance benefits include: primerless, as received bonding; chemically resistant; bonds diverse substrates; room temperature cure; extended working time; and gap filling to 0.5 inches.

TYPICAL PROPERTIES:

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

<i>Property:</i>	<i>Value:</i>	<i>Test Method or Source:</i>
Color	Part A: off white/ Part B: amber	Visual
Mix Ratio	Part A to Part B	
By weight	1 to 1	
By volume	1 to 1	
Flash Point, uncured	Part A: 51 °F / Part B: 51 °F	
Cure Schedule	Room temperature	
Work time	10-12 minutes	Time is dependent on the application and materials being bonded.
Fixture time	18-20 minutes	
Gap Filling	To 0.500 inches	
Viscosity – Part A	250,000 cps	Brookfield Viscosity, TD Spindle @2.5 rpm R050-12
Viscosity – Part B	300,000 cps	
Viscosity - Mixed	280,000 cps	
Hardness	70 Shore D	R050-17/ASTM D2240
Lap Shear Strength No surface preparation performed	PPO-HIP, Fiberglass, Fiberglass to gelcoat, Gelcoat to Gelcoat, PVC/PVC, SMC/SMC, ABS/ABS, PMMA/PMMA – all result in Stock Failure Steel/Steel = 4500 psi Alum/Aluminum – 3300 psi as received	R050-37/ASTM D1002
Impact Strength	FRP/FRP Auto Side Impact = >13 J/in ²	
Tensile Elongation	15%	R050-36/ASTM D638
Peel Test- as received no abrasion	Steel/Steel@72F >30pli	ASTM T Peel Test
Temperature Range	-40 to 250°F	

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INSTRUCTIONS:

1. Bring both components to room temperature prior to mixing. Cartridges should be stored in a vertical position to allow any air to accumulate at the tip. 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.
2. If used in bulk, 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. If the product is used in a side-by-side cartridge, 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.
3. Allow to cure undisturbed until product is fully gelled or tack-free to the touch.
4. Clean up uncured resin with suitable organic solvent such as MEK, acetone or other organic solvent.

CHEMICAL RESISTANCE

AR4315HP exhibits excellent resistance to commonly encountered service environments and chemicals. Depending on the materials being bonded, AR4315HP will retain bond strength in boiling water, salt water, salt fog, kerosene, gasoline, diesel fuel, antifreeze, hydraulic fluids, and cutting oils. Resistance to specific chemicals and environments must be tested.

NOT RECOMMEND FOR EXPOSURE TO: Toluene, MEK, Acetone, 100% low molecular weight aromatics, aldehydes, and ketones. Exposure to these chemicals should be tested by the end user. These chemicals can have an adverse effect on many adhesives.

APPLICATION NOTE: Do not apply to damp or wet substrates or dilute with water. Water has a negative impact on the structural integrity of the product and will lead to adhesive failure.

SHELF LIFE AND STORAGE:

6 months DOP at 25 °C
DO NOT FREEZE