



TECHNICAL DATA SHEET AR4305HP

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TECHNICAL DATA SHEET

Resinlab™ AR4305HP

Plastic / Metal / Composite Bonding Methacrylate Adhesive

PRODUCT DESCRIPTION:

Resinlab™ AR4305HP is a 1:1 mix methacrylate-based structural adhesive designed for general purpose bonding of a wide variety of materials in industrial applications. AR4305HP forms tough, durable bonds to most plastics, composites, metals, ceramics. It contains special adhesion promoters to enhance performance on hard to bond materials such as nylon, chrome and rubber. Surface cleaning or preparation, or the use of primers, or chemical wipes is not required in almost all cases. 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. AR4305HP 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.

PROCESS & PERFORMANCE BENEFITS

Primerless	Room Temperature Cure
As received bonding	Convenient 1:1 mix ratio
Chemically resistant	Gap filling to 0.500 inches
Bonds diverse substrates	Fast Fixture time

UNCURED PROPERTIES

	Part A	Part B
Viscosity, cps (Spindle TD, 2.5rpm).....	250,000	300,000
Color.....	Off white	Amber
Flash Point (LCC).....	51°F	51°F
Mix Ratio (wt & volume).....	1 : 1	

CURING PROPERTIES

Mixed Viscosity, cps(Spindle TD,2.5 rpm)....	280,000
Working Time.....	5 - 6 minutes
Fixture Time.....	9 - 10 minutes

* Curing properties are highly dependent on the specific application and the materials being bonded. The ranges used here are based on representative examples of typical applications.

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CURED PROPERTIES

Hardness.....65D
 Elongation.....15%
 Operating Temp.....-40° - 250°F

This product can go through paint bake cycle of 375°F for 20 minutes with no significant loss in strength.

BOND PERFORMANCE

Tensile shear (ASTM D1002) using commercial stock cut into 1x4 laps. No surface preparation performed.

PPO-HIPS..... Stock Failure	SMC/SMC.....Stock Failure
Fiberglass/Fiberglass*.....Stock Failure	ABS/ABS.....Stock Failure
PVC/PVC.....Stock Failure	PMMA/PMMA.....Stock Failure

*Fiberglass to gelcoat or gelcoat to gelcoat provides stock failure

Steel/Steel.....4000 psi	Alum/Aluminum..... 3500 psi as received
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Impact Strength

FRP/FRP Auto Side Impact.....>13 J/in²

Peel testing using ASTM T peel test method, as received steel, no abrasion

Steel/steel at 72F----- >30pli

CHEMICAL RESISTANCE

AR4305HP exhibits excellent resistance to commonly encountered service environments and chemicals. Depending on the materials being bonded, AR4305HP 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.

PACKAGING & SHELF LIFE

AR4305HP is available in cartridges, pails, and drums. The material can be used with conventional meter/mix/dispense equipment. All materials should be stored in a cool place when not used to preserve shelf life. Shelf life is 6 months date of package at or below 25°C. Do not freeze.

Rev Date: 01/16/2012