



# EXTREME EXT-312

## Flexible Methacrylate Adhesive

### PRODUCT DESCRIPTION

EXT-312 is a 1:1 meter-mix, methacrylate-based, structural adhesive formulated to bond engineered thermoplastics, fiberglass, composites, steel and aluminum together in any combination. EXT-312 forms tough, very flexible bonds without surface preparation, primers, or chemical wipes. It features a medium cure time to allow positioning and multiple assembly operations, but provides fast fixturing. EXT-312 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, and is easy to dispense through cartridges, static mixer tubes and bulk dispensing equipment.. EXT-312 is high viscosity for forming non sag beads on vertical surfaces and overhead application. The product is formulated to have a very low durometer for applications requiring outstanding flexibility, low bond read through, or for repair where the joint may need to be separated.

### PROCESS & PERFORMANCE BENEFITS

#### UNCURED PROPERTIES

	Part A	Part B
Viscosity, cps Spindle TE, 2.5rpm).	250,000	200,000
Viscosity, cps, Spindle TE 20 rpm	70,000	70,000
Specific Gravity.....	0.95	0.94
Color.....	Off White	Yellow
Flash Point (LCC).....	51°F	51°F
Mix Ratio (wt or volume).....	1 : 1	

#### CURING PROPERTIES\*

Mixed Viscosity, cps (#TE 2.5rpm).....	200,000
Working Time.....	10-14 minutes
Fixture Time.....	13-16 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.

#### CURED PROPERTIES

Color	Amber
Hardness.....	30-35 D
Elongation.....	150% (estimated)
Operating Temp.....	-40° - 250°F

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**BOND PERFORMANCE (FULL STRENGTH AFTER 72 HOURS CURE)**

TENSILE SHEAR (ASTM D1002)

Fiberglass/Fiberglass .....	800psi
ABS/ABS.....	Stock Failure
Steel/Steel.....	2500 psi
Alum/Aluminum.....	2300psi

All above surfaces are as received condition with no surface preparation

**PEEL STRENGTH**

Steel/Steel(ASTM D1876).....	30pli
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**IMPACT STRENGTH (GMC Auto Side Impact test\*)**

Steel/Steel.....	>13.56 Joules/in <sup>2</sup>
Alum/Aluminum.....	>13.56 Joules/in <sup>2</sup>

\*General Motors Corporation test uses a 1kg hammer to produce a maximum impact of 6.78 Joules/In<sup>2</sup>. EXTREME uses a 2kg hammer able to generate 13.56 Joules/In<sup>2</sup>. Values of >13.56 Joules/In<sup>2</sup> means that the 2kg hammer was stopped without the bond failing.

**CHEMICAL RESISTANCE**

31023AI exhibits excellent resistance to commonly encountered service environments and chemicals. Depending on the materials being bonded, 31023AI 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. *MUST BE TESTED BY CUSTOMER FOR EXPOSURE TO: toluene, MEK, Acetone, 100% low molecular weight aromatics, aldehydes, and ketones.*

**PACKAGING & SHELF LIFE**

EXT-312 is available 400ml, 1500ml cartridges, 5 gallon pails, and 50 gallon drums. The material can be used with conventional meter/mix dispense equipment. All materials should be stored in a cool place when not used for an extended period of time. Do not freeze. Shelf life of this product is six (6) months at 23°C when stored in original sealed container.

For technical service, samples or application assistance, please contact us at:  
Phone: 800-888-4583 or Fax: 603-895-6236

Visit us on the internet at [www.extremeadhesives.com](http://www.extremeadhesives.com)

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