

## MA 305 HV

**Description:** A 2-component 10:1 flexible methacrylate adhesive with fast fixturing and cure times.

**Intended Use:** Bonds steel furniture, speaker magnets, and dissimilar substrates. Bonds FRP/GRP/SMC, gel coat, honeycomb painted and plated metals (with primer), phenolics, polycarbonate, PVC polyesters, urethanes and vinyl esters along with ceramics.

**Product features:** **Excellent environmental resistance**  
**Excellent Impact, peel, and shear resistance**  
**Superb salt spray durability, including aluminum**

**Limitations:**

**Typical** Technical data should be considered representative or typical only and should not be used for specification purpose

<b>Physical Properties:</b>	<b>Cured 7 days@75° F</b>		<b>TEST CONDUCTED</b> Adhesive Tensile Shear ASTM D 1002 Cured Hardness Shore D ASTM D 2240 T-Peel Strength ASTM D 1876 Impact Resistance ASTM D 950
	<b>Adhesive Tensile Lap Shear[galvanized]</b>	<b>2,000 psi [with MP 90]</b>	
	<b>Adhesive Tensile Lap Shear[Al]</b>	<b>2,525 psi [with MP 90]</b>	
	<b>Adhesive Tensile Lap Shear[GBS]</b>	<b>2,250 psi</b>	
	<b>Adhesive Tensile Lap Shear[SS]</b>	<b>2,800 psi [with MP 90]</b>	
	<b>Gap Fill</b>	<b>.375 in.</b>	
	<b>Impact Resistance</b>	<b>22ft.lb./in.[2]</b>	
	<b>Shore Hardness</b>	<b>74 Shore D</b>	
	<b>Solids by Volume</b>	<b>100%</b>	
	<b>Specific Volume</b>	<b>28.55 in[3]/lb.</b>	
	<b>Tensile Elongation</b>	<b>100-125%</b>	
	<b>Tpeel</b>	<b>60-65pli</b>	
	<b>Uncured</b>		
	<b>Color</b>	<b>Black</b>	
	<b>Fixture Time</b>	<b>10-14 min.@75° F</b>	
	<b>Flashpoint</b>	<b>51° F</b>	
	<b>Full Cure</b>	<b>24 hours</b>	
	<b>Functional Cure</b>	<b>3/4-1 hrs</b>	
	<b>Mix Ratio by Volume</b>	<b>10:1</b>	
	<b>Mix Ratio by Weight</b>	<b>89:10</b>	
	<b>Mixed Density</b>	<b>8.09 lbs/gal /0.97gm/cc</b>	
	<b>Mixed Viscosity</b>	<b>120,000 cps</b>	
	<b>Service Temperature</b>	<b>-40° F to 250° F</b>	
	<b>Viscosity</b>	<b>Adhesive: 130,000 cps; Activator: 70,000cps</b>	
	<b>Weight</b>	<b>Adhesive: 8.0/lbs./gal.; Activator: 8.95lbs./gal.</b>	
	<b>Working Time</b>	<b>3.5-7.5 min.@75° F</b>	

**Surface Preparation:** Clean surface by solvent-wiping any deposits of heavy grease, oil, dirt, or other contaminants. Surface can also be cleaned with industrial cleaning equipment such as vapor phase degreasers or hot aqueous baths. If working with

metal, abrade or roughen the surface to significantly increase the microscopic bond area and optimize the bond strength.

**Mixing**

---- Proper homogenous mixing of resin and hardener is essential for the curing and development of stated strengths.

**Instructions:**

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**25 ML DEV-TUBE**

1. Squeeze material into a small container the size of an ashtray.
2. Using mixing stick included on Dev-tube handle, vigorously mix components for one (1) minute.
3. Immediately apply to substrate.

**35ML/50 ML/250 ML/380 ML/400 ML CARTRIDGES**

1. Attach cartridge to Mark V™ [50ml], 380ml, 250ml [15:1 caulk gun], or 400ml dispensing systems [manual or pneumatic].
2. Open tip.
3. Burp cartridge by squeezing out some material until both sides are uniform (ensures no air bubbles are present during mixing) .
4. Attach mix nozzle to end of cartridge.
5. Apply to substrate.

**Application**

1. Apply mixed product directly to one surface in an even film or as a bead.

**Instructions:**

2. Assemble with mating part within recommended working time.
3. Apply firm pressure between mating parts to minimize any gap and ensure good contact (a small fillet of product should flow out the edges to display adequate gap fill).
4. Bond line thickness of mixed adhesive should be @ .030" for optimum adhesion.

For very large gaps:

1. Apply product to both surfaces.
2. Spread to cover entire area OR make a bead pattern to allow flow throughout the joint.

Let bonded assemblies stand for recommended functional cure time prior to handling.

**ADDITIONAL PRODUCT INFORMATION:**

- Can withstand processing forces
- Do not drop, shock load, or heavily load
- Intermittent exposure to temperatures above 250°F do not reduce performance characteristics

**STAINLESS STEEL AND ALUMINUM APPLICATIONS:**

Apply Devcon Metal Prep 90 to prime and condition aluminum and stainless steel surfaces prior to using MA 305 HV. Metal Prep 90 is fast-drying at ambient temperatures. Composite Welder FS can be applied within minutes of its use. Overlap shear strength will improve 30-40% if Metal Prep 90 is used.

**Storage:**

Store between 55°F and 75°F. Continuous storage above 75°F reduces the shelf life of the materials. Prolonged exposure above 100°F quickly diminishes the product's reactivity, and should be avoided. Shelf life can be extended by refrigeration between 45°F and 55°F. DO NOT FREEZE.

**Compliance:**

Meets UL 746C Polymeric Adhesive Systems, Electrical Equipment-Component

**Chemical**

*Chemical resistance is calculated with a 7 day, room temp. cure (30 days immersion) @ 75°F)*

**Resistance:**

Acetic (Dilute) 10%	Very good
Ammonia	Very good
Cutting Oil	Excellent
Glycols/Antifreeze	Excellent
Hydrochloric 10%	Very good
Mineral Spirits	Excellent
Motor Oil	Excellent
Sodium Hydroxide 10%	Very good
Sulfuric 10%	Very good

**Precautions:**

Please refer to the appropriate material safety data sheet (MSDS) prior to using this product.

**For technical assistance, please call 1-800-933-8266**

**FOR INDUSTRIAL USE ONLY**

**Warranty:**

Devcon will replace any material found to be defective. Because the storage, handling and application of this material is beyond our control, we can accept no liability for the results obtained.

**Disclaimer:**

All information on this data sheet is based on laboratory testing and is not intended for design purposes. ITW Devcon makes no representations or warranties of any kind concerning this data.