



Metal Welder™

Description: Fast curing 10:1 methacrylate adhesive designed for structural bonding of metals without primers. The system requires little to no surface preparation or primers.

Intended Use: Structural bonding of aluminum, steel, and stainless steel, along with bonding thermoplastic and composite assemblies.

Product features:

- Excellent environmental resistance
- Low odor technology
- Bonds dissimilar substrates
- Excellent impact, peel, and shear resistance
- Beads in activator for proper bond line thickness

Limitations:

Typical Physical Properties: *Technical data should be considered representative or typical only and should not be used for specification purposes.*

Cured 7 days @ 75° F

Adhesive Tensile Shear	2,450 psi (GBS)
T-peel	>80 pli
Impact Resistance	20 ft.lb./in.(2)
Tensile Elongation	50-75%
Shore Hardness	75 Shore D
Gap-Fill	0.75 in.
Adhesive tensile shear (ABS)	1,250 psi
Adhesive tensile shear (AL)	2,372 psi
Adhesive tensile shear (epoxy composite)	2,200 psi
Adhesive tensile shear (SS)	2,407 psi
Operating temperature	-40°F to 250°F

Uncured

Color	Gray
Viscosity	Adh:52,000cps; Activ.:60,000cps
Mixed Viscosity	55,000 cps
Mix Ratio by Volume	10:1
Mix Ratio by Weight	Adhesive:100 parts; Activator 9.35 parts
Flashpoint	51°F
Working Time	5-6 min. @ 72°F, 22°C
Fixture Time	25-30 min. @ 72°F, 22°C
Functional Cure	1-2 hrs.
Full Cure	24 hrs. @ 75°F
Service Temperature	-40°F to 250°F
Coverage / lb	102 sq. in. @ .020"
Assembly time	8 min. @ 72°F, 22°C

TESTS CONDUCTED

Impact Resistance ASTM D 950
Adhesive Tensile Shear ASTM D 1002
T-Peel Strength ASTM D 1876
Cured Hardness Shore D ASTM D 2240

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

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/380ML/400 ML CARTRIDGES

1. Attach cartridge to Mark 5 dispensing system.
2. Open tip.

Application Instructions:

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.

1. Apply mixed product directly to one surface in an even film or as a bead.
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 @ .020"-.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.

CAPABILITIES:

Can withstand processing forces
Do not drop, shock load, or heavily load

Storage:

Store in a cool, dry place.

Compliances:

None

Chemical Resistance:

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

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

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.

Order Information:

14367 380 ml Co-axial cart
14366 35 ml DevPak