

8515 INTER-WELD 15

MSA Adhesive Panel Bonding

INTER-WELD 15 MSA is a 1:1, methacrylate, structural adhesive formulated to bond engineered thermoplastics, thermosets, composites and metal structural elements together in any combination. Forms tough, high strength, high impact, resistant bonds in all gaps. It features a medium cure time for flexibility in positioning and multiple operations, but provides for faster fixturing. Also has outstanding durability and environmental resistance to most common industrial cleaners, fuels, lubricants and environmental conditions. This product is formulated as a non-sag, creamy gel with balanced viscosity for both parts, and is easy to dispense through static mixer tubes and bulk dispensing equipment.

DIRECTIONS

- Clean surfaces to be bonded with IES Super Clean (#1700 or #4700) to remove any grease, wax or any other contaminants. Remove all paint, primer, corrosion and rust from surfaces to be bonded using a 36 grit Abrasive Trim-Kut Disc (IES #7060). When preparing aluminum surfaces use 80 grit abrasive disc.
- Straighten all metal and clamp replacement part into position for proper alignment and fit. There should be no tension on the replacement part.
- For metal surfaces, clean areas to be bonded with IES Super Clean (#1700 or #4700 Super Clean. Other cleaners may leave an oily film and prevent proper bonding. For SMC, fiberglass or plastic parts, wash areas with a clean cloth using soap and water, rinse thoroughly and allow to dry.
- For bonding steel surfaces using the Weld-Bonding method, apply IES Weld Thru Primer (#4525 or #4526) to the weld areas to ensure there will be no bare metal areas between the weld areas and the adhesive bond areas.
- Place adhesive cartridge in the applicator gun.
- Remove cap completely from cartridge. To remove cap, insert a flat head screw driver into slot and pry upward. Tilting the gun back, pump the gun until both parts (A & B) are equally flowing from the cartridge. (See separate INTER-MIX and INTER-WELD gun loading instructions).
- Attach the static mixer nozzle to the cartridge and turn clockwise until securely fastened. Prior to applying adhesive, dispense a bead of adhesive approximately the length of the mixer or longer to ensure a proper uniform mix.
- Apply IES INTER-WELD 15 MSA Adhesive (#8515) to all areas to be bonded (cover all bare metal surfaces). This means the replacement part as well as the vehicle. Using a plastic spreader, tool out the adhesive to provide a base coat for an additional adhesive bead, ensuring all bare metal surfaces are coated.
- Apply IES INTER-WELD 15 MSA Adhesive (#8515) approximately 1/4" from the inside edge of the replacement part. We recommend attaching an IES 1/2" or 1" Zip-Tip to the mixer to keep from applying too much adhesive.
- Clamp the part into its proper position within 10 minutes. When repositioning, slide the panel. Never lift the part when repositioning. Apply clamps at 12" intervals or closer if necessary. In areas where clamps cannot be applied, use sheet metal screws to hold the part in place.
- Tool any adhesive "squeeze out" to seal the outside seam along the bonded edge of the part.
- CAUTION: ADHESIVE IS FLAMMABLE when in a liquid state.** Allow adhesive to set before welding (approximately 25 to 30 minutes). Keep any welding to a minimum of two inches from the adhesive. Adhesive is combustible when cured and will burn. Refer to Material Safety Data Sheet.
- Spray the inside of the repair at the bonded seams with IES INTER-GUARD Rust Proofing Wax (Honeycoat Corrosion Fighter) (#4557) if possible.
- Clamps may be removed after welding or after adhesive has set, allow 25 to 30 minutes. Parts may need to remain clamped for a longer time if temperature is below 75° F. Cure time is approximately 24 hours.

Note: Set times, de-clamping times, cure times etc. are based on 75 degrees F. Cooler temperatures may extend the time as warmer temperatures may lessen the time.

TECHNICAL INFO

Work Time: 10-15 Min. Approx.
Handling Time: 25 to 30 Minutes
Full Cure Strength: 24 Hours Approx.

Application Temp: 70 - 90°F (21-32°C)

Storage Temp: Below 75°F (24°C), Dry conditions

UNCURED PROPERTIES:

	Part A	Part B
Viscosity, nominal cps (#7, 2.5rpm)	200,000	200,000
Color	Black	Amber
Flash Point (LCC)	51°F	51°F
Mix Ratio (wt & volume)	1 : 1	

CURING PROPERTIES*

Mixed Viscosity, cps (#7, 2.5rpm)	200,000
Open Time	10 - 15 minutes
Fixture Time	25 - 30 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

Hardness	70D
Elongation	>20 %
Operating Temp Range	-40°F to 275°F

BOND PERFORMANCE

Tensile shear ASTM D1002 using commercial stock cut into 1x4 laps. No surface preparation other than chemically wiped.

PPO-HIPS	Stock Failure	SMC/SMC	Stock Failure
Fiberglass/Fiberglass*	Stock Failure	ABS/ABS	Stock Failure
PVC/PVC	Stock Failure	Gelcoat /Gelcoat	Stock failure
Steel/Steel	>3500 psi	Alum/Alum (2024T)	>3000 psi

IMPACT STRENGTH

Steel/Steel, alum/alum, abs/abs Auto Side Impact	>21KJ/m2 (9.5ft-lbs/ft2) stops hammer at 72°F test
Impact test at cold and hot temps for steel/steel at -60°F	17KJ/m2, at 300°F >20KJ/m2

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

Steel/Steel @ 72°F: 34 pli @ -60°F: 27 pli @ 300°F hot strength: 29 pli

CHEMICAL RESISTANCE

INTER-WELD 15 MSA exhibits excellent resistance to commonly encountered service environments and chemicals. Depending on the materials being bonded, INTER-WELD 15 MSA 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 RECOMMENDED FOR CONTINUOUS EXPOSURE TO: Crude oil, toluene, MEK, Acetone, 100% low molecular weight aromatics, aldehydes, and ketones.

WARNING: Uncured liquid Polyester resin / styrene repair compounds and fiber glass gelcoats should never be applied over the top of IES #8515 INTER-WELD Methyl-Methacrylate Adhesive. A reaction between the polyester resin and the MMA will occur resulting in the breakdown of the adhesive.

8515 300 mL cartridge kit 4/case

each kit includes two static mixers (#8265), one 1/2" and one 1" Zip-Tip.

FOR PROFESSIONAL USE ONLY