



Kapp AutoBody™ Repair Guidelines

- Step 1 Pre-clean the parent metal. Use emery cloth, a wire brush, sandblasting, etc. Cleaning galvanized and steel surfaces is often done with a stainless steel wire brush. Breaking the oxide coating by agitation is an important key to successful body solder application.
- Step 2 If the area to be repaired includes welds, all weld flux residue and weld spatter shall be removed by wire brush, chipping, grinding or power scaling.
- Step 3 Pre-flux using Kapp Copper Bond™ flux, if necessary (most applications do NOT require flux). Use a soft flame, heat gun or soldering iron to heat the parent metal repair area to at least 600°F/315°C. **Do not heat the surface over 750°F/400°C.** If you use a direct flame, please keep it moving. A direct flame held on the repair area is likely to overheat the solder. Wire brush the surface during heating.
- DO NOT DIRECTLY HEAT THE SOLDERING ROD!**
- Step 4 Hold the torch tip 4 to 6 inches away from the parent metal. If it is necessary to apply the flame directly to the rod to get it started, pull the torch tip back even farther from the work surface and keep it moving.
- Step 5 Drag the rod over the area to be soldered, until it begins to flow. **ONCE THE ROD FLOWS, STOP APPLYING THE HEAT!** Deposit the desired thickness of KappBody™ solder. The stainless steel brush works well to spread the solder and ensure it is adhering. If additional layers are needed, continue to drag the rod over the area. Bring back the heat only to keep the Surface, NOT the Rod hot enough to push the solder around to where you want it.
- Step 6 Sometimes it is necessary to heat the tip of the rod with the flame to help the solder flow more easily onto the repair area. **DO NOT HEAT THE ROD TO THE MELTING POINT!**
- Step 7 Observe the solder deposit. The solder should bond smoothly. **DO NOT OVERHEAT!** The solder rod will melt if overheated, but will not bond properly. Spread the solder deposit evenly over the repair area. A stainless steel brush works well for this step.
- Step 8 If you stopped soldering and want to apply more solder or flow out the deposit more, let the area cool below the solid temperature of 390°F/200°C, and reheat. The existing Kapp AutoBody™ solder will help the bonding process, whether adding more solder or just flowing out the previous deposit. If substantial time has elapsed since the original Kapp AutoBody™ solder was applied, pre-clean the repair area again to remove any oxide coating that will impair bonding. Again, a Stainless Steel brush works well.
- Step 9 Smooth the repair area and remove any excess solder with a wire brush.
- Step 10 Repeat these steps to build up additional layers of Kapp AutoBody™ solder.

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Physical Properties & Technical Data

Melting Range	390°F - 570°F / 200°C - 300°C
Tensile Strength	39,000 psi
Compression Strength	60,000 to 75,000 psi
Shear Strength	34,000 psi
Impact Strength (Charpy)	4 ft.lbs. to break 1/4" bar
Hardness (Brinell-500 kg. load)	100
Ductility	Good
Density	.25lbs./cu. in.
Elongation	3% in 2 inches
Linear Expansion Coefficient	15.4 x 10 ⁶ / °F
Electrical Conductivity	24.9 (%IACS)
Thermal Conductivity	.24 cal / cm ³ / °C
Corrosion Penetration	300 x 10 ⁶ in 1 1 / R
Flux	Kapp Copper Bond Flux
ASTM Specifications	Exceeds A780-09