



## General Soldering Guidelines

- Step 1 Pre-clean the parent metal or metals to be joined. Use emery cloth, a wire brush, sandblasting, etc. Prepare Aluminum and Stainless Steel surfaces with a stainless steel wire brush. Breaking the oxide coating by agitation and fluxing is one key to successful soldering, especially for Aluminum and Stainless Steel parts.
- Step 2 Apply the appropriate Kapp non-corrosive liquid flux to draw the solder into the joint/repair area. The flux also serves to remove oxide layers which prohibit strong bonding. The recommended flux is listed on each soldering alloy information page. You may easily use the rod to spread the flux.
- Step 3 Use a soft flame, heat gun or soldering iron to heat the parent metal adjacent to the repair area. A direct flame on the repair area is likely to overheat the solder and flux.
- 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 or flux, pull the torch tip back even farther from the work surface and keep it moving.
- Step 5 The flux will begin to bubble and turn light brown. Besides preparing the parent metal for the solder, these changes indicate the proper flux working temperature. If the flux turns black, let the area cool, clean it & start over.
- Step 6 When the flux turns brown, it is time to apply the rod. Drag the rod over the area to be soldered, until it begins to flow.
- ONCE THE ROD FLOWS, STOP APPLYING THE HEAT!**
- If additional layers are needed, continue to drag the rod over the area.
- Step 7 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 8 Observe the solder deposit. The solder should bond smoothly.
- DO NOT OVERHEAT!**
- The solder rod will melt if overheated, but will not bond properly.
- Step 9 If you stopped soldering and want to apply more solder or flow out the deposit more, let it cool a little, add more flux and reheat. The flux will help the bonding process, whether adding more solder or just flowing out the previous deposit.
- Step 10 Remove the excess flux with warm water and a wire brush. Flux is corrosive, and residue should be thoroughly removed – even for “no-clean” fluxes.