



Technical Bulletin

JOHNSON MANUFACTURING COMPANY
Princeton, Iowa 52768-0096

JOHNSON'S ALUMAWELD SOLDERS AND FLUX

For Soldering Aluminum, Alnico, Cast Iron, Chrome Plated Metals, Dowmetal, Inconel, Monel, Stainless Steels and other difficult-to-solder metals. Also, the joining aluminum and copper, and their alloys together is made practical and easy by the use of Johnson's Alumaweld Solders and Johnson's Alumaweld Flux. Soldered joints are stronger than aluminum tubing itself, and they are gas tight.

DIRECTIONS:

1. Clean and brighten both the copper and the aluminum with scotch bright, or a stainless steel toothbrush.
2. Stir the Alumaweld Flux, then using a small acid brush apply flux sparingly to both the brightened copper and aluminum parts which are to be soldered.
3. Heat at a moderate rate by slanting the flame so that most of the heat is applied to the copper, while the aluminum receives only the spillover of the flame.
4. When white smoke appears and the flame turns bright orange, this is an indication to apply #22 Alumaweld Solder. It will be drawn into the finest space, by means of heat and the flux, which promotes capillary attraction.
5. While the solder is still molten, wipe the joint clean and observe the job. If the fit is loose, immediately reheat the joint and add a little more #22 Alumaweld Solder. (Note: Joints must not be disturbed while the solder is setting).
6. Wash off all excess flux and residues with warm or hot water. A light buffing with a piece of scotch bright may give the finished joint a neat appearance.

PHYSICAL DATA:

Johnson's #22 Alumaweld Solder is an alloy of Tin and Zinc that begins to melt at 390 degrees F and is fully molten at 635 degrees F. Johnson's #21 Alumaweld Solder is preferred for some jobs because it is a eutectic alloy. It both melts and flows at 390 degrees F. Alumaweld Solders have high tensile strength similar, to other lead-free solder alloys. They offer excellent corrosion resistance and can be machined, polished or plated. Alumaweld Solders are lighter weight than ordinary solders, therefore they cover a greater area per pound.

Johnson's Alumaweld Flux has been formulated for use with both #21 and #22 Alumaweld Solders. It is a non-acid, inorganic chloride flux which produces a powerful cleaning when heat is applied. Alumaweld Flux has a most unusual capillary action; when used on lap seams, the flux will pull solder through the entire joint.

If you have a special soldering problem, let us assist you with the correct solution.



TO ORDER CALL (800) 747-0030, FOR SUPPORT CALL (563) 289-5123, TO SEND FAX (563) 289-3825, EMAIL TO johnsonmfg@aol.com