
Solder & Lead Products - How To Use

Application:



1. Assemble all material you will need.
2. Select Oatey soldering products. Read all instructions carefully.
3. Select and cut the copper pipe squarely using a tubing cutter or hacksaw.
4. Clean all the copper surfaces to be joined using Oatey fitting and tubing brushes or sandcloth.
5. Apply Oatey tinning or paste Flux to the inside of the copper fitting and outside of the copper pipe.
6. Assemble the joint.
7. Heat the joint evenly and apply Oatey solder wire to the joint only after flux begins to bubble. This indicates proper temperature has been reached.
8. Remove heat and solder wire once a bead has formed around the fitting. Allow the solder to cool before wiping away excess with a damp cloth.

Soldering is the most common method for connecting joints in copper water lines. Flux is used to remove foreign material from copper surfaces and to etch the copper surface. Without flux, solder will not flow into the joint. Thus, filling the void between the pipe and fitting provides a water-tight seal.

Oatey Safe-Flo® Silver is a patented* alloy of Tin, Copper, Silver, and Bismuth that works much like 50/50 solder. Oatey #95 Tinning Flux contains powdered lead-free solder that melts when the joint is heated, coating the joint with a thin layer of solder that ensures the solid wire will flow into the joint. When used together, they are as easy to use as a 50/50 solder.

1. After you have selected Oatey #95 Tinning Flux and Safe-Flo Silver Solder, assemble your materials and put on protective eye wear. You'll need to cut your pipe. A tubing cutter will ensure a square cut. If the joint is not cut squarely or if the tube is mis-shaped, the joint may not solder properly.
2. All surfaces to be soldered must be free of all foreign material and the oxide that forms on copper tubing. We recommend that you use Oatey fitting and tubing brushes or sandcloth. The Oatey 4-in-1 brush is a convenient tool for cleaning 1/2" and 3/4" copper tube and fittings. If all surfaces are bright and shiny, the flux will properly etch the copper surface. When applying flux, remember to coat both the fitting and copper tube before you assemble your joint. Use caution when working with Oatey flux as well as with any flux. Do not allow contact with eyes or skin. Wear impervious clothing while handling. Wash thoroughly when finished.
3. Although heating the joint is not a complicated process, you must be sure to address a few issues before you begin.

- If the joint to be heated is close to a floor joist, wall stud or any combustible material, place an Oatey Flame Protector between the joint and material of concern. This will provide protection from heat and flames up to 2000 degrees F.
 - If you are soldering an existing water line, try to drain the line as much as possible. Water in the line will prevent the joint from reaching the required temperature. If you cannot drain all the water sufficiently, place a wadded up piece of bread into the line to prevent the water from flowing. The bread will hold the water back, allow the joint to be heated, and then easily wash away through the line when the water is turned on.
 - Solder flows to the hottest part of the joint, so heat the joint evenly so that the Safe-Flo Silver Solder will flow through the entire joint. Apply heat to one side of the joint and solder wire to the other. Never heat the solder wire itself.
4. Solder is drawn into the joint by capillary action and a bead of solder will form around the joint when it's filled. When the bead appears, you know the joint is completed.
 5. Be careful when wiping away the excess solder and flux residue that is left on the joint. Although the pipe may appear to be cool, always use a damp cloth to remove the excess solder and flux residue. Never touch the pipe without allowing it to cool.

* Oatey Safe-Flo® Silver is a trademark of the Oatey Company

* U.S. Patent No. 4,879,096