



TECHNICAL INFORMATION SHEET

Stay Silv® Brazing Flux Removal

Stay Silv white or black brazing flux residue can usually be removed by washing or immersing the part in water immediately after brazing. Brushing or swabbing the brazed area in conjunction with the water quench may help remove stubborn residue. Care should be taken in cleaning joints involving dissimilar metals. Different metal contraction rates may cause braze cracking. In this case allow the joint to cool before washing.

If water isn't sufficient mechanical cleaning may be necessary. Brushing with a stainless steel wire brush, jets of steam, emery cloth, or blast cleaning methods may be employed. Care should be taken to ensure metal or glass particles are not embedded in soft base metals. Small particles of iron, from a regular steel brush for example, can cause pitting corrosion.

Tenacious flux residue can also be chemically removed. A mild acid solution of 10 - 25% by volume hydrochloric or phosphoric acid is often effective. Heating the solution to 120-150 °F (49-65 °C) will speed action. The assembly can then be dipped or washed in a neutralizing solution of soda ash (sodium carbonate) and water, followed by a clear water rinse. *(Follow recommended procedure and use appropriate safeguards when using acid solutions.)*

An alternative to caustic acids is a citric acid solution. A mixture of 4 lbs. of citric acid added to 24 gallons of water is adequate for flux removal. Concentrations can be varied depending on part size and quantity. Heating the solution to 120 °F (49 °C) and agitation during heating will hasten the process. A solution of 5 -10% bicarbonate of soda and water can be used as a second step to neutralize acid residue. Clear water heated to 120 °F(49 °C) should be used as a final rinse. The citric acid solution, while effective, is generally slower than using hydrochloric or phosphoric acid.

Brazing flux absorbs oxides formed during heating. If insufficient flux is used, or if the heating cycle is lengthy, the flux may become saturated with oxides. If this occurs removal of flux residue may be difficult. Consider using additional flux or try Stay Silv Black brazing flux. The black flux remains effective longer during heating and may reduce post braze cleaning requirements.

SAFETY INFORMATION:

WARNING: PROTECT yourself and others. Read and understand this information.
FUMES AND GASES and VAPORS can be hazardous to your health.
FLUX IS CORROSIVE: may be harmful or fatal if inhaled or swallowed.
FLUX CAUSES SKIN AND EYE BURNS.
DO NOT TASTE OR SWALLOW.
DO NOT GET ON SKIN OR IN EYES.
KEEP OUT OF THE REACH OF CHILDREN.
HEAT RAYS, (infrared radiation) from flame or hot metal can injure eyes.

- Before use, read and understand the manufacturer's instructions, Material Safety Data Sheets (MSDS), and your employer's safety practices.
- Keep your head out of fumes.
- Use enough ventilation, exhaust at the flame, or heat source, to keep fumes and gases from your breathing zone and the general area.
- Wear correct eye, ear, and body protection.

See American National Standard Z49.1, *Safety in Welding, Cutting, and Allied Processes*, published by the American Welding Society, 8669 Doral Blvd., Doral, FL 33166; OSHA Safety and Health Standards, available from the U.S. Government Office, Washington, DC 20402.

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