

HARRIS SSWF1

Harris Stay-Silv White Brazing Flux User Manual

Model: SSWF1

1. INTRODUCTION

The Harris Stay-Silv White Brazing Flux is an all-purpose, low-temperature flux designed for use in silver brazing applications. It facilitates the joining of most ferrous and non-ferrous metals, ensuring strong and reliable bonds. This manual provides essential information for the safe and effective use of this product.

2. SAFETY INFORMATION

DANGER: Before use, read the Material Safety Data Sheet (MSDS) for complete safety information. This product can cause severe burns to eyes and skin. Inhalation of fumes can be harmful.

- **Personal Protective Equipment (PPE):** Always wear appropriate eye protection (safety goggles or face shield), gloves, and protective clothing when handling this product.
- **Ventilation:** Use in a well-ventilated area or with local exhaust ventilation to keep fumes below exposure limits. Ensure adequate breathing zone ventilation.
- **First Aid - Eyes:** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Seek immediate medical attention.
- **First Aid - Skin:** Wash affected areas thoroughly with soap and water. If irritation persists, seek medical attention.
- **First Aid - Ingestion:** Do not induce vomiting. If swallowed, seek medical attention immediately.
- **Storage:** Keep out of reach of children and store in a cool, dry place.
- **Disposal:** Dispose of product and container in accordance with local, state, and federal regulations.

For detailed information, refer to the Material Safety Data Sheet (MSDS) available from The Harris Products Group or your supplier.

3. PRODUCT OVERVIEW



Figure 3.1: A white plastic jar of Harris Stay-Silv White Brazing Flux, showing the product label with brand name, product type, and safety warnings.

Harris Stay-Silv White Brazing Flux is formulated for silver brazing applications. Its active temperature range is 1050°F - 1600°F (565°C - 871°C). It is compatible with most ferrous and non-ferrous metals, but it is **not recommended** for use on aluminum, magnesium, and titanium.

Key Features:

- All-purpose, low-temperature flux.
- Active range: 1050°F - 1600°F.
- Suitable for use with most ferrous and non-ferrous metals.
- Meets AWS A5.31, FB3A, and AMS 3410 specifications.

4. SETUP

Proper preparation of the work area and materials is crucial for successful brazing.

1. **Clean Surfaces:** Ensure all surfaces to be brazed are thoroughly cleaned of dirt, grease, oxides, and other contaminants. Use mechanical cleaning (e.g., wire brush, abrasive paper) followed by chemical cleaning if necessary.
2. **Joint Fit-up:** Ensure a proper joint fit-up. Capillary action, which draws the molten filler metal into the joint, works best with clearances between 0.001 and 0.005 inches (0.025 to 0.127 mm).
3. **Ventilation:** Set up your work area with adequate ventilation as described in the Safety Information section.
4. **Tools and Materials:** Gather all necessary tools, including the heat source (torch), brazing filler metal, and appropriate personal protective equipment.

5. OPERATING INSTRUCTIONS

Follow these steps for effective brazing with Stay-Silv White Brazing Flux:

1. **Apply Flux:** Apply a thin, even coat of Stay-Silv White Brazing Flux to all surfaces of the joint that will be heated. The flux should cover the area where the filler metal will flow.
2. **Assemble Joint:** Assemble the parts to be brazed, ensuring they are properly aligned and secured.
3. **Heat Application:** Begin heating the assembly. Heat the base metals evenly, not the filler metal directly. The flux will become active and turn clear as the temperature approaches the brazing range (1050°F - 1600°F). This indicates the base metal is ready to accept the filler metal.
4. **Apply Filler Metal:** Once the flux is clear and molten, touch the brazing filler metal to the joint. The heat from the base metal should melt the filler metal, drawing it into the joint by capillary action. Do not melt the filler metal with the direct flame.
5. **Cooling:** Allow the brazed assembly to cool naturally. Do not quench with water immediately after brazing, as this can cause thermal shock and weaken the joint.
6. **Flux Residue Removal:** After cooling, remove any remaining flux residue. While this flux leaves minimal residue, it is good practice to clean the joint, especially if it will be painted or plated. Warm water and a brush can often remove residue.

6. MAINTENANCE

Proper storage and handling will ensure the longevity and effectiveness of your brazing flux.

- **Storage:** Keep the flux container tightly sealed when not in use to prevent contamination and drying out. Store in a cool, dry place, away from direct sunlight and extreme temperatures.
- **Contamination:** Avoid introducing foreign materials into the flux jar. Use a clean applicator.
- **Shelf Life:** While brazing flux generally has a long shelf life if stored correctly, inspect the product for any signs of degradation (e.g., excessive hardening, discoloration) before use.

7. TROUBLESHOOTING

If you encounter issues during brazing, consider the following common problems and solutions:

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
Filler metal not flowing into joint.	Insufficient heat; improper joint clearance; contaminated surfaces; flux not active.	Ensure base metals reach brazing temperature; check joint fit-up; thoroughly clean surfaces; ensure flux is molten and clear.
Joint appears weak or porous.	Insufficient flux; overheating; contaminated surfaces; incorrect filler metal.	Apply adequate flux; avoid excessive heat; ensure clean surfaces; verify filler metal compatibility.
Excessive smoke or fumes.	Overheating flux; inadequate ventilation.	Control heat application; improve ventilation in the work area.

8. SPECIFICATIONS

- **Product Name:** Stay-Silv White Brazing Flux
- **Model Number:** SSWF1
- **Brand:** HARRIS
- **Active Temperature Range:** 1050°F - 1600°F (565°C - 871°C)
- **Compatibility:** Most ferrous and non-ferrous metals (excluding aluminum, magnesium, titanium)
- **Standard Compliance:** Meets AWS A5.31, FB3A, AMS 3410
- **Item Package Weight (1 lb jar):** Approximately 1.08 lb
- **Item Package Dimensions (1 lb jar):** Approximately 4.75" L x 4.75" W x 3.38" H

9. WARRANTY AND SUPPORT

For information regarding product warranty, technical support, or to obtain a Material Safety Data Sheet (MSDS), please contact The Harris Products Group directly. Contact details can typically be found on the product packaging or their official website.

Manufacturer: The Harris Products Group

For further assistance, visit the official Harris Products Group website or consult your local distributor.