

J14-024



MATERIAL SAFETY DATA SHEET-BRAZING FLUXES

STAY SILV[®] WHITE BRAZING FLUX

STAY SILV[®] BLACK BRAZING FLUX

GB 88 FLUX, AUTO DISPENSE FLUX

STAY SILV[®] #99 SILVER BRAZING FLUX POWDER

SECTION 1

Manufacturer's Name
J. W. Harris Co., Inc.

Emergency Telephone No.
1-800-424-9300

Address
10930 Deerfield Rd.
Cincinnati, OH 45242

Telephone No. for Information
1-513-891-2000

Signature of Preparer: *David Thawley*

Date Prepared 6/92 SUPERSEDES 4/90

SECTION 2

HAZARDOUS INGREDIENTS

INGREDIENT	CAS NUMBER	PEL MG/M ₃	TLV MG/M ₃
Potassium Tetraborate	1332-77-0	15	10
Potassium Pentaborate	11128-29-3	15	10
Boric Acid as H ₃ Bo ₃	10043-35-3	15	10
Potassium Bifluoride (F)	7789-29-9	2.5	2.5
Water	7732-18-5	N.L.	N.L.

Important: This section covers the materials from which the product is manufactured. Additional information about the fumes and gases produced during brazing with normal use of this product are covered in Section 6.

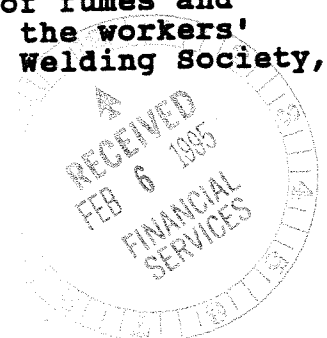
SARA SECTION 313 SUPPLIER NOTIFICATION: Individual fluxes covered by this MSDS may contain toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40CFR 372. Refer to Section 2 for the CAS Number for each chemical ingredient.

Remaining ingredients are proprietary and claimed as trade secrets.

NFPA HAZARD SIGNAL

Health	1	Flammability	0
Stability	0	Special	0

One recommended way to determine the composition and quantity of fumes and gases to which workers are exposed is to take an air sample in the workers' breathing zone. See ANSI/AWS F1.1 available from the American Welding Society, P. O. Box 351040, Miami, FL 33135.



SECTION 3 - PHYSICAL AND CHEMICAL DATA

These products are shipped as nonhazardous, nonflammable, non explosive, and non reactive solid materials.

Boiling Point	760 mm Hg° F	Specific Gravity	White 1.54
Vapor Pressure	N/A		Black 1.66
Vapor Density	N/A	Melting Point	N/A
Solubility in Water	Moderate	Evaporation Rate	N/A

Appearance and odor:

Stay-Silv White Flux, GB 88 Flux, and Auto Dispense Flux are smooth white pastes with no odor.
Stay-Silv Black Flux is a smooth black paste with no odor.
Stay-Silv #99 Flux is a fine white powder with no odor.

SECTION 4 - FIRE AND EXPLOSION DATA

Nonflammable. Open flame and sparks can ignite combustibles. See ANSI/ASC-Z49.1-1983 Section 6.

SECTION 5 - HEALTH HAZARD DATA

EXPOSURE-Section 2 covers ingredients and exposure limits on STAY-SILV White and STAY-SILV Black Brazing Flux. See Section 6 for additional information. Actual exposure limits should be determined by monitoring the fume in the operator's breathing zone.

PRIMARY ROUTE OF EXPOSURE-Inhalation of fume. Skin or eye contact is also possible.

POSSIBLE EFFECTS OF EXPOSURE-Fumes are irritating to skin, eyes, and the respiratory tract.

EMERGENCY FIRST AID-Remove from fume exposure. If breathing has stopped perform artificial respiration. If swallowed, induce vomiting. Never give anything by mouth to an unconscious person. For skin contact, wash with water. For eye contact, immediately flush eyes for 15 minutes with plenty of water. Get medical aid immediately.

OTHER HEALTH CONSIDERATIONS-Fluxes are used with brazing filler metals. When melted, these filler metals may produce fumes which are hazardous. Filler metals may contain cadmium. Fume generated during brazing with cadmium alloys may be toxic. Consult the material safety data sheets that pertain to these products.

CARCINOGENICITY	NTP?	NO	IARC MONOGRAPHS?	NO	OSHA REGULATED?	NO
-----------------	------	----	------------------	----	-----------------	----

SECTION 6 - REACTIVITY DATA

HAZARDOUS DECOMPOSITION PRODUCTS

Brazing fumes cannot be classified simply. The composition and quantity are dependent upon the metal being brazed, the procedures, and the filler metal used. Other conditions which also influence the composition and quantity of the fumes to which workers may be exposed include: coatings on the metal being soldered (such as paint, plating, or galvanizing), the amount of ventilation, and the position of the operator's head with respect to the fume. The fume decomposition products generated may be different in percent and form from the ingredients listed in Section 2.

SECTION 7 - SPILL OR LEAK PROCEDURES

SPILL OR LEAK PROCEDURES-Large spills should be neutralized with a slaked lime-soda ash slurry. Follow Federal, State, and Local regulations for disposal.

SECTION 8 AND 9 - SPECIAL PROTECTION INFORMATION AND PRECAUTIONS

Read and understand the manufacturer's instructions and the precautionary label on the product. See American National Standard Z49.1, *Safety in Welding and Cutting* published by the American Welding Society, PO BOX 351040, Miami, FL 33135; and OSHA Publication 2206 (29CFR1910), U. S. Government Printing Office, Washington, D.C. 20402 for more details on many of the following.

VENTILATION-Use enough ventilation to keep the fumes below TLV's in the workers breathing zone and the general area. Train the employee to keep his head out of the fumes. See ANSI/ASC Z49.1 Section 5.

RESPIRATORY PROTECTION-Use respirable fume respirator or air supplied respirator when brazing in confined space or where local exhaust or ventilation does not keep exposure below TLV.

EYE PROTECTION-Wear safety glasses, goggles or use face shield with ~~filter~~ lens of appropriate shade number (see ANSI/ASC Z49.1-Section 4.2). Provide protection screens and flash goggles, if necessary, to shield others.

PROTECTIVE CLOTHING-Wear head and body protection which help to prevent injury from radiation, sparks, and flame. See ANSI Z49.1. At a minimum this includes gloves and a protective face shield or goggles, and may include arm protectors, aprons, hats, shoulder protection, as well as dark substantial clothing.

The information and recommendations contained in this publication have been compiled from sources believed to be reliable and to represent the best information on the subject at the time of issue. No warranty, guarantee, or representation is made by J. W. Harris Co., Inc. as to the absolute correctness or sufficiency of any representation contained in this and other publications; J. W. Harris Co., Inc. assumes no responsibility in connection therewith; nor can it be assumed that all acceptable safety measures are contained in this (and other publications), or that other or additional measures may not be required under particular or exceptional conditions or circumstances.

