MATERIAL SAFETY DATA SHEET

MAY BE USED TO COMPLY WITH OSHA'S HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200 AND SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (SARA) OF 1986 PUBLIC LAW 99-499. STANDARD SHOULD BE CONSULTED FOR SPECIFIC REQUIREMENTS.

SECTION I (IDENTIFICATION)

MANUFACTURER/ SUPPLIERS NAME: HIGH PERFORMANCE PRODUCTS
1220 SHAPPERT DRIVE
MACHESNEY PARK, IL 61115

EMERGENCY PHONE: 815-985-0441

PRODUCT NAME: HPP 521AC

PRODUCT CLASSIFICATION: Solder and Acid Core Solder

SECTION II (HAZARDOUS INGREDIENTS/IDENTITY INFORMATION)

IMPORTANT: This section covers materials from which this product is manufactured. The fumes and gases produced during normal use of this product is covered in Section V. The term "Hazardous" in "Hazardous Ingredients" should not be interpreted as a term required and defined in OSHA Hazard Communication Standard (29 CFR Part 1910.1200). The chemicals or compounds subject to reporting under Title III, in Section 313 of the Superfund Amendments and Reauthorization Act (SARA) are marked with the symbol #.

WARNING: This product contains or produces a chemical known to the State of California to cause birth defects (or other reproductive harm) and cancer. (California Health & Safety Code 25249.5 et seq.)

		EXPOSURE LIMIT (mg/m³)		Weight
INGREDIENTS	**CAS No.**	**OSHA PEL**	**ACGIH TLV**	**PERCENT INGREDIENTS**
TIN	7440-31-5	2	2	88 - 98
SILVER #	7440-22-4	0.01	0.01	1 - 5
Acid core (if applicable)				1 - 3
Azelaic Acid	123-99-9			
Ethylene Diamine Dihydrochloride	333-18-6			
Ethylamine Hydrochloride	557-66-0			
Succinimide	123-56-8			
Urea	57-13-6			

SECTION III (PHYSICAL DATA)

Silver, no characteristic odor.

SECTION IV (FIRE AND EXPLOSION HAZARD DATA)

Nonflammable: Brazing flames can ignite combustibles. Refer to American National Standard Z49.1 for fire prevention during welding/brazing. Rating under National Fire Protection 704: Health, 0; Flammability, 0; Reactivity, 0. Use CO^2 or dry chemical extinguisher. Use NIOSH approved self-contained breathing apparatus and full protective clothing if involved in fire. Finely divided dust may form explosive mixtures with air.

SECTION V (REACTIVITY DATA)

STABILITY: Stable

CONDITIONS TO AVOID: None

INCOMPATIBILITY (Conditions to avoid): Strong acids/alkalis

HAZARDOUS POLYMERIZATION: will not occur.

Boiling Point: Tin: 2270 C
Silver: 2210 C

Dust should be kept at a minimum. Brazing fumes cannot be classified simply. The composition and quantity of both are dependent upon the metal being brazed, the process, procedure, and the filler material used. Other conditions which also influence the composition and quantity of the fumes and gases to which workers may be exposed include: coatings on the metal being soldered (such as paint, plating, or galvanizing), the number of workers and the volume of the work area, the quality and the amount of ventilation, position of the worker's head with respect to the fume plume, as well as the presence of contaminants in the atmosphere (such as chlorinated hydrocarbon vapors from cleaning and decreasing activities).

When the material is consumed, the fume and gas decomposition products generated are different in percent and form from the ingredients listed in Section II. Fume and decomposition products, not the ingredients in the flux are important. Decomposition products include those originating from the volatilization, reaction, or oxidation of materials in Section II, plus those from the base metal and coating, etc., as noted above. These components are virtually always present as complex oxides and not as metals (Characterization of Arc Welding Fume: American Welding Society).

Monitor fume levels. One recommended way to determine the composition and quantity of fumes and gases to which workers are exposed is to take an air sample inside the worker's face shield, if worn, or in the worker's breathing zone (see ANSI/AWS F1.1 available from the "American Welding Society" P.O. Box 351040, Miami, FL 33135).

SECTION VI (HEALTH HAZARD DATA)

Threshold Limit Value: The ACGIH 1984-85 preface states: "The TLV-TWA should be used as guides in the control of health hazards and should not be used as firm lines between safe and dangerous concentrations." See Section V for specific fume constituents which may modify the TLV. Persons with sensitive skin should avoid contact with core.

Effects of Overexposure:

FUMES AND GASES can be dangerous to your health. **PRIMARY ROUTES OF ENTRY** are the respiratory system or ingestion. **PREEXISTING** respiratory or allergic conditions may be aggravated in some individuals. **SHORT TERM (ACUTE) AND CHRONIC OVEREXPOSURE** to fumes may result in discomfort such as dizziness, nausea, or dryness or irritation of nose, throat or eyes.

Emergency &First Aid Procedures: Call for medical aid. Employ first aid techniques recommended by The American Red Cross. SWALLOWING: Call a physician or your poison control center at once. Advise of Section II. SKIN: Wash thoroughly with water to remove all residue. If a rash develops, call a physician. INHALATION: Remove to fresh air. EYES: Flush with water for at least 15 minutes to remove all residue. Get medical attention immediately.

Carcinogenicity	NTP	NIOSH	IARC Monographs	OSHA Regulated
When Present		Welding Fumes (n.o.c.)		

SECTION VII (PRECAUTION FOR SAFE HANDLING AND USE/APPLICABLE CONTROL MEASURES)

Steps to be taken if material is released or spilled: Contain spill, absorb, sweep up and dispose. Flush area to chemical sewer.
Waste disposal method: Dispose of in accordance with all federal state, and local regulations.

SECTION VIII (SPECIAL PROTECTION INFORMATION)

Read and understand the manufacturer's instructions and precautionary label on this product. See American National Standard Z49.1 Safety in Welding and Cutting, published by the American Welding Society, P.O. Box 351040, Miami FL 33135 and OSHA Publication 2206 (29CFR 1910), U. S. Government Printing Office, Washington, D.C. 20402 for more detail on the following:

Ventilation: Use enough ventilation, local exhaust at the arc, or both, to keep the fumes and gases below the TLV's in the workers breathing zone and the general area. Train the worker to keep his head out of the fumes. Maintain air flow away from user to exhaust all dusts and fumes, so that the TLV is never exceeded.

Respiratory protection: Use respirable fume respirator or air supplied respirator when soldering in confined space or where local exhaust or ventilation does not keep exposure below TLV.

Eye protection: Wear helmet or face shield and safety goggles.

Protective Clothing: Wear head, hand, and body protection which help to prevent injury from acid core. See ANSI Z49.1. At a minimum, this includes chemical impervious gloves and a protective face shield and may include arm protectors, aprons, hats, shoulder protection, and any other equipment used in soldering operations as to prevent any contact.

Waste: Dispose of any grinding dust or waste residues in accordance with all federal, state, and local regulations. If material is spilled or released, contain spillage, absorb, sweep up, dispose. For core, wash with water to chemical sewer.

Storage: Store in dry conditions, ambient temperatures.

Wash thoroughly after handling to remove all residue. Remove and professionally wash contaminated clothing before reuse.