THERMADYNE

Victor

MATERIAL SAFETY DATA SHEET

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File No. MSDS8/6

Identity: HTFC-1, Flow Control Alloy, 0386-0430

This MSDS is based on air/fuel or oxy/fuel process. There may be other cautions for electric process.

SECTION II - Hazardous Ingredients/Identify Information

Hazardous Components (Specific Chemical Identity)	CAS No.	Common Name(s)	mg/m³ OSHA PEL	mg/m³ ACGIH TLV	OTHER LIMITS RECOMMENDED
Copper (fume)	7440-50-8		0.1	0.2	N/A
Silver (metal)	7440-22-4		0.01	0.1	N/A
Silver (oxide)	1314-13-2		5.0	5.0 (fume)	N/A
Silver (soluble compound)	7440-22-4		0.01	0.01	N/A
Tin (oxide)	7440-31-5		2.0	2.0	N/A

Brazing rod or wire is a nonhazardous solid at ambient temperature. Hazards (as defined by OSHA 29CFR 1910.1200) may result from fume generated during brazing. **IMPORTANT - See Section VI for information on potential fume hazard resulting from use of the product.**

SECTION III - Physical/Chemical Characteristics

Solid wire or rod.

SECTION IV - Fire and Explosion Hazard Data

(Nonflammable) Open flame and can ignite combustibles, See ANSI/ASC Z49.1-1983 Section VI.

SECTION V - Reactivity Data

Exposure - Section II lists exposure limits for hazardous decomposition products which might be present in fume generated during brazing. Actual exposure should be determined by monitoring fume in the operator's breathing zone.

Primary Route of Exposure - Inhalation of fume.

Pre-existing Medical Conditions - Individuals with impaired pulmonary functions or illness may have symptoms exacerbated by fume irritants.

Possible Effects of Exposure - Copper and zinc fume may cause metal fume fever. Short term symptoms may include a metallic taste in the mouth, dryness or irritation of the throat followed by coughing, shortness of breath, nausea, fever, body ache, and chills. Long term exposure to welding fume gases or dust may contribute to pulmonary irritation or pneumoconiosis.

Emergency First Aid - Remove from dust or fume exposure. If breathing has stopped, perform artificial respiration. Summon medical aid immediately.

SECTION VI - Health Hazard Data

Brazing fumes and gases cannot be classified simply. The composition and quantity of both are dependent upon the metal being brazed, the process, procedures, and filler metals 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 brazed (such as paint, plating, or galvanizing), the number of operators and the volume of the work area, the quality and amount of ventilation, the position of the operator'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 degreasing activities). When the filler metal is consumed, the fume and gas decomposition products generated are different in percent and form from the solid wire or rod ingredients. Fume and gas decomposition products, and not the ingredients in the rod or wire are important. The concentration of a given fume or gas component may decrease or increase by many times the original concentration in the filler metal. Also, new compounds not in the rod or wire may form. Decomposition products of normal operation include those originating from the volatilization reaction, or oxidation of the wire or rod plus those from the base metal and coating, etc., as noted above.

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 worker's breathing zone. See ANSI/AWS F1.1 available from the American Welding Society, P.O. Box 351040, Miami, Florida 33135.

SECTION VII - Precautions for Safe Handling and Use

Not Applicable

SECTION VIII - Control Measures

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, P.O. Box 351040, Miami, FL 33135 and OSHA Publication 2206 (29CFR1910), U.S. Government Printing Office, Washington, D.C. 20402 for more detail on many of the following.

Ventilation

Use enough ventilation, local exhaust at the flame to keep the fumes and gases below TLV's in the worker's breathing zone and the general area. Train the employee to keep his head out of the fumes. See ANSI/ASCZ49.1 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 ANSIZ49.1. At a minimum this includes welder's gloves and a protective face shield, and may include arm protectors, aprons, hats, shoulder protection, as well as dark substantial clothing.