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VICTOR EQUIPMENT COMPANY

MATERIAL SAFETY DATA SHEET

Product: VIPER 95/5

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Common Name : TIN/ANTIMONY (95/5) SOLDER ALLOY  
Chemical Name : TIN/ANTIMONY ALLOY  
Formula : Sn-Sb  
Product CAS No.: CHEMICAL MIXTURE  
Product Use : Welding/Brazing/Soldering

Supplier : VICTOR EQUIPMENT COMPANY  
Address : 2800 AIRPORT ROAD  
City, St, Zip : DENTON, TEXAS 76207  
Phone : 1-940-566-2000

FOR CHEMICAL EMERGENCY CALL CHEMTREC (24 HOURS):  
1-800-424-9300 (US, Canada, Puerto Rico, Virgin Islands)  
1-703-527-3887 (Outside Above Area)

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT	CAS NO.	% Wt.
TIN	7440-31-5	95
ANTIMONY	7440-36-0	5

INGREDIENT NOTES

NOTE: The percentage by weight values reported for the ingredients in this product represent approximate formulation values. See Section 8 for Exposure Limits and Section 11 for Toxicological Information.

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Silver to grey metallic solid

Odorless

Flash Point: Not Applicable

Overexposure may cause damage to the liver, kidneys and the nervous system.

Prolonged or repeated inhalation of dust or fume may cause lung injury. May cause respiratory tract irritation. Overexposure to freshly formed fumes may cause a flu-like illness called "metal fume fever".

May cause eye and skin irritation.

Not a fire or explosion hazard in solid form. Finely divided dust may ignite and burn rapidly when mixed with air in the proper proportions. Toxic metal fumes may be released in a fire situation.

ROUTES OF ENTRY

Eyes? YES

Skin? YES

Inhalation? YES

Ingestion? YES

POTENTIAL HEALTH EFFECTS

EYE CONTACT may cause irritation.

SKIN CONTACT may cause irritation.

INHALATION may cause irritation of the respiratory tract. Short-term overexposure to freshly formed fumes may cause a flu-like illness called metal fume fever, with symptoms of headache, sore throat, congestion, fever, chills, muscle aches, nausea, vomiting and weakness. Symptoms usually disappear within 24-48 hours.

INGESTION is harmful. Causes irritation and may cause systemic toxicity.

NOTE: The potential health effects described above only apply if dust or fume is formed.

CARCINOGENICITY

NTP? NO

IARC? NO

OSHA? NO

CHRONIC HEALTH HAZARDS

Refer to Potential Health Effects.

Prolonged or repeated inhalation may cause a benign pneumoconiosis.

Prolonged overexposure to ANTIMONY may lead to liver, kidney, Cardiovascular and central nervous system damage.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE

May aggravate existing medical conditions such as respiratory and/or kidney and liver ailments.

Individuals with pre-existing diseases of the central nervous system may have increased susceptibility to the toxicity of excessive exposures.

NOTE: See Section 8 for Exposure Limits, Section 11 for Toxicological Information and Section 12 for Ecological Information.

SECTION 4: FIRST AID MEASURES

EYE CONTACT: Flush eyes with plenty of water. If irritation develops, call a physician.

SKIN CONTACT: Immediately wash skin with soap and plenty of water. If irritation persists, call a physician.

INHALATION: If exposed to excessive levels of metal fumes, remove to fresh air and seek medical attention.

INGESTION: Procedures normally not needed. If large quantities are ingested, seek medical advice.

SECTION 5: FIRE-FIGHTING MEASURES

Flash Point: Not Applicable  
Auto-Ignition: Not Applicable  
LEL: Not Applicable  
UEL: Not Applicable

NFPA HAZARD CLASSIFICATION

Health: 2                      Flammable: 0                      Reactivity: 0

HMIS HAZARD CLASSIFICATION

Health: 2\*                      Flammable: 0                      Reactivity: 0                      Special: B

\* Indicates the possibility of chronic health effects. See Chronic Health Hazards in Section 3 for more information.

EXTINGUISHING MEDIA

Use carbon dioxide, chemical foam or dry chemical. Use any means for extinguishing surrounding fire.

Do NOT use water on metal fires.

SPECIAL FIRE FIGHTING PROCEDURES

Wear NIOSH/MSHA approved positive-pressure self-contained breathing apparatus and protective clothing as specified in 29 CFR 1910.156.

## UNUSUAL FIRE AND EXPLOSION HAZARDS

Not a fire or explosion hazard in solid form. Finely divided dust may ignite and burn rapidly when mixed with air in the proper proportions. Toxic metal fumes may be released in a fire situation.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

Contain spillage and scoop up or vacuum. Notification of the National Response Center (800/424-8802) may be required. Refer to EPA, DOT and applicable state and local regulations for current response information.

It is recommended that each user establish a spill prevention, control and countermeasure plan (SPCC). Such plan should include procedures applicable to proper storage, control and clean-up of spills, including reuse or disposal as appropriate (see Section 13: Disposal Considerations).

**\*\*NOTE\*\*** In the event of an accidental release of this material, the above procedures should be followed. Additionally, proper exposure controls and personal protection equipment should be used (see Section 8: Exposure Control/Personal Protection), and disposal of the material should be in accordance with Section 13: Disposal Considerations.

## SECTION 7: HANDLING AND STORAGE

Wash thoroughly after handling.

Store in a cool, dry location away from incompatible materials.

Avoid contact with any dusts, mists or fumes resulting from the use of this product.

Do not eat, drink, or smoke in work area.

Use only with adequate ventilation.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### EXPOSURE LIMITS

INGREDIENT	PEL-OSHA	TLV-ACGIH
TIN		
CAS NO.: 7440-31-5	2 mg/m3	2 mg/m3
ANTIMONY		
CAS NO.: 7440-36-0	0.5 mg/m3	0.5 mg/m3

NOTE: Both OSHA and the ACGIH list welding fumes as having an exposure limit of 5 mg/m3 (total particulate not otherwise classified). However, the ACGIH states that welding fumes must be tested frequently for individual components which are likely to be present to determine whether specific exposure limits are exceeded.

NOTE: The permissible exposure limits (PELs), threshold limit values (TLVs), potential health effects statements and SARA hazard categories may not be applicable as the hazardous ingredients listed are in the solid form. If dust, powder or fume is generated then these statements will be applicable.

Unless otherwise noted, all values are reported as 8-hour Time-Weighted Averages (TWAs) and total dust (particulates only). All ACGIH TLVs refer to the 1998 Standards. All OSHA PELs refer to 29 CFR Part 1910 Air Contaminants: Final Rule, January 19, 1989.

#### RESPIRATORY PROTECTION

A NIOSH/MSHA-approved respirator as necessary.

#### VENTILATION

General; local exhaust ventilation as necessary to control any air contaminants to within their PELs or TLVs during the use of this product.

#### PROTECTIVE EQUIPMENT

Refer to ANSI/ASC Z49.1-94 (Safety in Welding, Cutting and Allied Processes), published by the American Welding Society, for further information on the selection of personal protective equipment. Safety glasses (with side shields). Body protection as necessary to prevent skin contact.

#### PERSONNEL SAMPLING PROCEDURE

For METALLIC COMPONENTS: Refer to NIOSH Manual of Analytical Methods (NMAM), 4th Edition, Method 7300.

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Silver to grey metallic solid  
Odor: Odorless  
Boiling Point: 1380 to 2260 °C  
Specific Gravity (H<sub>2</sub>O=1): 5.77 to 5.84  
Melting Point: 232 to 630 °C  
Vapor Pressure (mm Hg): Not Applicable  
Vapor Density (Air=1): Not Applicable  
Evaporation Rate: Not Applicable  
% Solubility In Water: Insoluble  
pH: Not Applicable

### SECTION 10: STABILITY AND REACTIVITY

Stability: Generally considered stable.  
Avoid: None expected.

INCOMPATIBILITY (Materials to Avoid)

Strong oxidizers, acids and bases, chlorine, turpentine, nascent hydrogen, reducing agents, halogens.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS

Toxic metal oxides are emitted when heated above the melting point. The amount of fume evolved increases as the temperature rises.

Polymerization: Polymerization is not expected to occur.

Avoid: Not applicable.

SECTION 11: TOXICOLOGICAL INFORMATION

CHEMICAL NAME	% Wt.	LD50	LC50
TIN			
CAS NO.: 7440-31-5	95	Not Available	Not Available
ANTIMONY			
CAS NO.: 7440-36-0	5	7,000 mg/kg RAT, oral	Not Available

NOTE: See Sections 3, 8 and 12 for additional information.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY

No data available.

ENVIRONMENTAL FATE

No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

US EPA Waste Number: Not Regulated

Federal, state and local disposal laws and regulations will determine the proper waste disposal/recycling/reclamation procedure. All waste materials should be reviewed to determine the applicable hazards (testing may be necessary). Disposal requirements are dependent on the hazard classification and will vary by location and the type of disposal selected.

**\*\*NOTE\*\*** Chemical additions, processing or otherwise altering this material may make the waste management information presented above incomplete, inaccurate or otherwise inappropriate.

As local regulations may vary; all waste must be disposed/recycled/reclaimed in accordance with federal, state, and local environmental control regulations.

SECTION 14: TRANSPORT INFORMATION

INTERNATIONAL

UN Number: Not Regulated

UNITED STATES

EPA Waste Number: Not Regulated  
DOT Classification: Not Regulated

CANADA

PIN Number: Not Regulated  
TDG Class: Not Regulated

EC

DGL: Not Determined

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

TSCA: IN TSCA

SARA 311 AND 312 HAZARD CATEGORIES

IMMEDIATE (Acute) Health Hazard: YES  
DELAYED (Chronic) Health Hazard: YES  
FIRE Hazard: NO  
REACTIVITY Hazard: NO  
Sudden Release of PRESSURE: NO

SARA SECTION 313 NOTIFICATION

This product contains a toxic chemical (or chemicals) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

CHEMICAL NAME	CAS Number	% Wt.
ANTIMONY	7440-36-0	5

OZONE DEPLETING SUBSTANCES (ODS)

This product neither contains nor is manufactured with an ozone depleting substance subject to the labeling requirements of the Clean Air Act Amendments 1990 and 40 CFR Part 82.

VOLATILE ORGANIC COMPOUNDS (VOC)

None

US STATE REGULATIONS

VOLATILE ORGANIC COMPOUND (CARB): Not Applicable

CANADIAN REGULATIONS

"This product has been classified in accordance with the hazard criteria of the *Controlled Products Regulations* and the MSDS contains all the information required by the *Controlled Products Regulations*."

DSL/NDSL: DSL

WHMIS Classification: Uncontrolled Product

EUROPEAN REGULATIONS

EINECS: Yes

OTHER REGULATIONS

MITI (Japan): No

AICS (Australia): Yes

SECTION 16: OTHER INFORMATION

REVISIONS

Revision Number: 6

PREPARATION INFORMATION

Prepared By: VICTOR EQUIPMENT COMPANY

Phone Number/Address: See Section 1

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This Material Data Sheet is offered pursuant to OSHA's Hazard Communication Standard (29 CFR 1910.1200). Other government regulations must be reviewed for applicability to these products. The information in this Material Safety Data Sheet should be provided to all who will use, handle, store, transport, or otherwise be exposed to this product. This information has been prepared for the guidance of plant engineering, operations, and management and for persons working with or handling these products. The information presented in the MSDS is premised upon proper handling and anticipated uses and is for the material without chemical additions/alterations. We believe this information to be reliable and up-to-date as of the date of publication, but make no warranty that it is. Additionally, if this Material Safety Data Sheet is more than three years old, please contact the supplier at the phone number listed in Section 1 to make certain that this sheet is the most current.