



MATERIAL SAFETY DATA SHEET



SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT: M-Line 450-20R Solder

April 13, 2010

Vishay Measurements Group, Inc.
Post Office Box 27777
Raleigh, NC 27611

919-365-3800

CHEMTREC 1-800-424-9300 (U.S.)
703-527-3887 (Outside U.S.)

NOTE: CHEMTREC numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

SECTION 2: HAZARDOUS INGREDIENTS / IDENTITY INFORMATION

CAS NUMBER	CHEMICAL IDENTITY	%
7440-31-5	Tin	95.0
7440-36-0	Antimony	5.0
8050-09-7	Rosin	1-3

SECTION 3: HEALTH HAZARD DATA

Routes of Entry:

Inhalation: Yes **Skin:** No **Ingestion:** Accidental

Health Hazards (Acute and Chronic): Smoke during soldering will contain rosin which is an allergen that can cause eye irritation and respiratory system irritation and damage.

Carcinogenicity: NTP: Not listed
 IARC Monographs: Not listed
 OSHA Regulated: Not listed

Signs and Symptoms of Exposure:

INHALATION: Flux fumes during soldering may cause irritation and damage of mucous membranes and respiratory system.

EYE CONTACT: Hot solder can burn eyes. Smoke during soldering can cause eye irritation.

SKIN CONTACT: Hot solder can burn skin. May cause sensitization by skin contact. Possible local reaction by contact with flux or fumes.

INGESTION: May cause gastrointestinal irritation.

Conditions Generally Aggravated by Exposure: Chemical hypersensitivity, asthma and other respiratory conditions, existing eye and skin disorders.

SECTION 4: EMERGENCY AND FIRST AID PROCEDURES
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INHALATION: Remove person from exposure to fumes. Supply fresh air. Consult physician in case of complaints.

EYE CONTACT: For burns, flush immediately with cool water and get medical attention. For fume irritation use eye drops and remove from exposure.

SKIN CONTACT: For burns, flush immediately with cool water. If a rash develops from flux fumes remove person from exposure and wash skin with soap and water.

INGESTION: Seek medical attention.

SECTION 5: FIRE AND EXPLOSION HAZARD DATA
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Flash Point (Method Used): N/A

Flammable limits: LEL: N/A UEL: N/A

Extinguishing Media: Carbon dioxide, dry powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Special Firefighting Procedures: Avoid breathing smoke. Wear self-contained breathing apparatus if this material is in the vicinity of a fire.

Unusual Fire and Explosion Hazards: Product does not present an explosion hazard. Flux in cored solder may ignite when the solder melts in a fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Steps to be taken if material is released or spilled: Ensure adequate ventilation. Do not allow to enter sewers, surface or ground water. Melted solder will solidify on cooling and can be scraped up. Use caution to avoid breathing fumes if a gas torch is used to cut up large pieces.

SECTION 7: EXPOSURE CONTROLS -- PERSONAL PROTECTION

Respiratory Protection: When ventilation is not sufficient to remove fumes from the breathing zone, a NIOSH approved respirator should be worn.

Ventilation: Provide adequate exhaust ventilation (general and/or local) if necessary to meet exposure requirements. Local exhaust ventilation is preferred to minimize dispersion of smoke and fumes into the work area.

Protective Gloves: Wear rubber or cloth gloves to avoid skin contact.

Eye Protection: Safety glasses or goggles should be used.

Other Protective Clothing or Equipment: None.

Work / Hygienic Practices: Keep away from food and beverages. Wash hands after handling solder and before eating or smoking. Avoid breathing fumes. Immediately remove all soiled and contaminated clothing.

SECTION 8: HANDLING AND STORAGE

Precautions to be taken in handling and storing: Ensure good ventilation or exhaust in the work area. Store in dry conditions.

Other Precautions: No special requirements.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:	Undetermined
Vapor Pressure (mmHg):	Not determined
Vapor Density (Air = 1):	N/A
Specific Gravity (H₂O = 1):	>7
Melting Point:	>212°F (>100°C)
Evaporation Rate (BuAc = 1):	N/A
Volatile Organic Compounds:	0%
Solubility in Water:	Insoluble

Appearance and Odor: Solid, silver-gray metal in wire shape. Odorless.

SECTION 10: STABILITY AND REACTIVITY DATA

Stability: Stable under normal conditions of use and storage.

Conditions to Avoid: None.

Incompatibility (Materials to Avoid): Strong acids, strong oxidizers.

Hazardous Decomposition or By-products: No decomposition if used according to specifications. When heated to soldering temperatures, the rosin may be thermally degraded to liberate aliphatic aldehydes, acids and terpenes. No antimony is detected in fumes from soldering below 1000°F (537°C).

Hazardous Polymerization: Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

Tin

OSHA PEL:	2.0 mg/m ³
ACGIH TLV:	2.0 mg/m ³
OTHER:	N/E

Antimony

OSHA PEL:	0.5 mg/m ³
ACGIH TLV:	0.5 mg/m ³
OTHER:	LD ₅₀ INGESTION (RAT) 7.0 g/kg

Rosin (Colophony) Not listed

SECTION 12: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Solder is reclaimable. Disposal should be in accordance with local, state, and federal regulations.

SECTION 13: TRANSPORTATION INFORMATION

SHIPPING NAME	CLASS	UN NUMBER
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Not required – Shipped as non-hazardous article.

SECTION 14: REGULATORY INFORMATION

SECTION 313 SUPPLIER NOTIFICATION:

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

CAS NUMBER	CHEMICAL NAME	% BY WEIGHT
7440-36-0	Antimony	5.0

TSCA NOTIFICATION:

All components of this product are listed in the Toxic Substance Control Act Chemical Substance Inventory (TSCA).

SECTION 15: OTHER INFORMATION

To the best of our knowledge, the information provided above meets the requirements of the United States Occupational Safety and Health Act and regulations established under 29 CFR 1910.1200 (g)(2)(c)(1)-(4) for a mixture of hazardous chemicals which has not been tested as a whole. The data provided on this Material Safety Data Sheet is from manufacturers of the original components. Micro-Measurements specifically disclaims any and all form of liability and/or responsibility for the application of this product.