



# MATERIAL SAFETY DATA SHEET

## SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT:** M-Line 570-25R Solder

November 17, 2005

Vishay Micro-Measurements  
Post Office Box 27777  
Raleigh, NC 27611

**MSDS # MGM061B**

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	%
7439-92-1	Lead	90-95
7440-31-5	Tin	4-6
7440-22-4	Silver	1-2
8050-09-7	Rosin	1-3

## SECTION 3: HEALTH HAZARD DATA

### Routes of Entry:

**Inhalation:** YES    **Skin:** NO    **Ingestion:** YES

**Health Hazards (Acute and Chronic):** Acute effects may include weakness, vomiting, loss of appetite, convulsions, stupor and possible coma. Chronic effects may include weakness, insomnia, hypertension, slight irritation of the eyes, headache, possible paralysis. Chronic over-exposure to lead may result in damage to blood forming, nervous, urinary and reproductive systems.

**Carcinogenicity:** NTP: No  
IARC Monographs: See Note  
OSHA Regulated: No

**NOTE:** Formaldehyde formed during the decomposition of rosin flux is listed as a suspected human carcinogen by ACGIH. Lead is listed by IARC as 2B.

**Signs and Symptoms of Exposure:**

**INHALATION:** Dust, vapor, and fumes may be irritating to the respiratory system.

**EYE CONTACT:** Dust, vapor, and fumes may be irritating to the eyes.

**SKIN CONTACT:** Dust, vapor, and fumes may be irritating to the skin.

**INGESTION:** None listed.

**Conditions Generally Aggravated by Exposure:** Lead and its inorganic compounds are neurotoxins which may produce neuropathy. Rosin is an allergen.

<b>SECTION 4: EMERGENCY AND FIRST AID PROCEDURES</b>
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**INHALATION:** Remove victim from exposure. Get medical attention if experiencing effects of overexposure.

**EYE CONTACT:** Flush with copious amounts of water. Get medical attention.

**SKIN CONTACT:** Wash with soap and water.

**INGESTION:** Get immediate medical attention.

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

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

**Extinguishing Media:** Carbon dioxide, dry chemical, foam.

**Special Firefighting Procedures:** Use full body protective clothing and full face piece, self-contained breathing apparatus operated in a positive pressure mode.

**Unusual Fire and Explosion Hazards:** Do not use water on fires when molten metal is present. High temperatures may produce heavy metal fumes, dust and/or vapor.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**Steps to be taken if material is released or spilled:** Particulate matter should be stored in dry containers for later disposal. Dust material should be vacuumed or wet-swept. Do not use compressed air or dry sweeping as a means of cleaning.

**SECTION 7: EXPOSURE CONTROLS -- PERSONAL PROTECTION**

**Respiratory Protection:** Use NIOSH approved respirator if exposure exceeds PEL.

**Ventilation:** Use local exhaust to remove smoke from breathing zone.

**Protective Gloves:** Impervious gloves are recommended.

**Eye Protection:** Faceshield or safety glasses are recommended.

**Other Protective Clothing or Equipment:** Personal clothing and shoes should be protected from contamination. Eyewash station should be available in the work area.

**Work / Hygienic Practices:** Do not eat, drink, or smoke in work areas. Wash hands thoroughly after using and before eating, drinking, or smoking.

**SECTION 8: HANDLING AND STORAGE**

**Precautions to be taken in handling and storing:** Wash hands with soap and water after handling solder. Store in dry area. Avoid skin contact. Avoid breathing smoke during soldering.

**Other Precautions:** None known.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

<b>Boiling Point:</b>	N/A
<b>Vapor Pressure (mmHg):</b>	N/A
<b>Vapor Density (Air = 1):</b>	N/A
<b>Specific Gravity (H<sub>2</sub>O = 1):</b>	11
<b>Melting Point:</b>	565°F (296°C)
<b>Evaporation Rate (BuAc = 1):</b>	N/A
<b>Volatile Organic Compounds:</b>	N/A
<b>Solubility in Water:</b>	Insoluble

**Appearance and Odor:** Gray metal with neutral odor.

**SECTION 10: STABILITY AND REACTIVITY DATA**

**Stability:** Stable.

**Conditions to Avoid:** None known.

**Incompatibility (Materials to Avoid):** Strong oxidizers.

**Hazardous Decomposition or By-products:** High temperatures may produce heavy metal fumes, dust and/or vapors.

**Hazardous Polymerization:** Will not occur.

**SECTION 11: TOXICOLOGICAL INFORMATION**

Lead

OSHA PEL:	0.05 mg/m <sup>3</sup>
ACGIH TLV:	0.05 mg/m <sup>3</sup>
OTHER:	Not established

Tin

OSHA PEL:	2.0 mg/m <sup>3</sup>
ACGIH TLV:	2.0 mg/m <sup>3</sup>
OTHER:	Not established

Silver

OSHA PEL:	0.01 mg/m <sup>3</sup>
ACGIH TLV:	0.1 mg/m <sup>3</sup>
OTHER:	Not established

Rosin

OSHA PEL:	Not established
ACGIH TLV:	Not established
OTHER:	Not established

**SECTION 12: DISPOSAL CONSIDERATIONS**

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

**SECTION 13: TRANSPORTATION INFORMATION****SHIPPING NAME****CLASS****UN NUMBER**

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.

<b>CAS NUMBER</b>	<b>CHEMICAL NAME</b>	<b>% BY WEIGHT</b>
7439-92-1	Lead	90 - 95
7440-22-4	Silver	1 - 2

**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. Vishay Micro-Measurements specifically disclaims any and all form of liability and/or responsibility for the application of this product.