



# MATERIAL SAFETY DATA SHEET



## SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT:** M-Line 361-40R 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	63.0
7439-92-1	Lead	37.0
8050-09-7	Rosin	1-3

## SECTION 3: HEALTH HAZARD DATA

**Routes of Entry:**

**Inhalation:** YES    **Skin:** YES    **Ingestion:** Accidental

**Health Hazards (Acute and Chronic):** Repeated inhalation or ingestion of lead can result in systemic poisoning.

**Carcinogenicity:**    NTP:                      Not listed  
                                 IARC Monographs:    See Note  
                                 OSHA Regulated:     Not listed

NOTE: IARC has placed lead and its compounds in Class 2B, possibly carcinogenic to humans.

**Signs and Symptoms of Exposure:**

**INHALATION:** Overexposure to lead may lead to central nervous system disorders characterized by drowsiness, seizures, coma and death. Exposure of this magnitude is unlikely.

**EYE CONTACT:** None.

**SKIN CONTACT:** None.

**INGESTION:** Not likely to occur, but would have similar effects as inhalation.

**Conditions Generally Aggravated by Exposure:** Pre-existing conditions or diseases of the blood and blood forming organs, kidneys, nerves and possibly reproductive system.

<b>SECTION 4: EMERGENCY AND FIRST AID PROCEDURES</b>
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**INHALATION:** Remove victim from exposure to fumes.

**EYE CONTACT:** For burns, flush immediately with cool water.

**SKIN CONTACT:** For burns, flush immediately with cool water.

**INGESTION:** If thought to be overexposed, the person should have a blood-lead analysis done.

**NOTE:** Symptoms of poisoning may even occur several hours after over exposure. Medical observation for at least 48 hours is recommended.

<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:** Use media appropriate for surrounding fire.

**Special Firefighting Procedures:** Use NIOSH approved self-contained breathing apparatus in case of toxic lead fumes.

**Unusual Fire and Explosion Hazards:** Flux in cored solder may ignite when the solder melts in a fire.

<b>SECTION 6: ACCIDENTAL RELEASE MEASURES</b>
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**Steps to be taken if material is released or spilled:** 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:** Usually not required. 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:** Not usually required.

**Eye Protection:** When soldering, use goggles or face shield.

**Other Protective Clothing or Equipment:** None.

**Work / Hygienic Practices:** Wash hands thoroughly after handling solder containing lead and before eating, drinking or smoking.

## SECTION 8: HANDLING AND STORAGE

**Precautions to be taken in handling and storing:** Store away from sources of sulfur. Wash hands after handling solder containing lead and before eating, drinking, or smoking. Avoid breathing smoke fumes during soldering. Do not place flux cored solder into a hot solder pot since flux may ignite. Use of strong acid fluxes may result in liberation of toxic lead chloride fumes.

**Other Precautions:** Empty containers may contain product residue. Observe all label precautions.

## 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>	>1
<b>Melting Point:</b>	N/A
<b>Evaporation Rate (BuAc = 1):</b>	N/A
<b>Volatile Organic Compounds:</b>	N/A
<b>Solubility in Water:</b>	Insoluble

**Appearance and Odor:** Silver-gray metal in wire form.

## SECTION 10: STABILITY AND REACTIVITY DATA

**Stability:** Stable under normal conditions of use and storage.

**Conditions to Avoid:** None.

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

**Hazardous Decomposition or By-products:** No lead or antimony are 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<sup>3</sup>  
ACGIH TLV: 2.0 mg/m<sup>3</sup>  
OTHER: N/E

Lead

OSHA PEL: 0.05 mg/m<sup>3</sup>  
ACGIH TLV: 0.15 mg/m<sup>3</sup>  
OTHER: N/E

Rosin

OSHA PEL: N/E  
ACGIH TLV: N/E  
OTHER: N/E

**SECTION 12: DISPOSAL CONSIDERATIONS**

**Waste Disposal Method:** Solder can be reclaimed. 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
7439-92-1	Lead	37.0

**TSCA NOTIFICATION:**

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

<b>SECTION 15: OTHER INFORMATION</b>
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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.