

**MATERIAL SAFETY DATA SHEET**

White Filmarker Tape

SECTION I	
Manufacturer's Name Roentgen Industrial Corp.	Emergency Telephone No. (630) 231-1500
Address/City/ST/Zip 396 Fenton Ln., #605, West Chicago, IL 60185	
Chemical Name and Synonyms	Trade name and Synonyms Tin / Lead allows and Tin / Lead foils
Chemical Family Metal	Formula

**SECTION II – HAZARDOUS INGREDIENTS**

Material	Contents	CAS No.	OSHA 1910.1000	1989-90 ACGIH
Lead	0 – 99.9%	7439-92-1	0.05 mg/m <sup>3</sup>	0.15 mg/m <sup>3</sup>
Antimony	0 – 6.0%	7440-38-0	0.5 mg/m <sup>3</sup>	0.5 mg/m <sup>3</sup>
Tin	0 – 99.9%	7440-31-5	2.0 mg/m <sup>3</sup>	2.0 mg/m <sup>3</sup>
Silver	0 – 5.0%	7440-22-4	0.1 mg/m <sup>3</sup>	0.1 mg/m <sup>3</sup>

This product contains toxic chemicals that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986, and 40CFR Part 372.

No other hazardous material is present in concentrations greater than 1% (0,1% Carcinogens)

**SECTION III – PHYSICAL DATA**

Boiling Pt	1,740°C for lead	Specific Gravity (H2O=1)	7.28 – 11.34 grs/cm <sup>3</sup>
Vapor Pressure (mm Hg)	3.69 x 10 <sup>-9</sup> mbar (318° C Lead) not to be measured at 20° C	Percent Voltage	N/A
Vapor Density (AIR=1)	N/A	Evaporating Rate (Butylacetat=1)	N/A
Solubility in Water	Non-soluble	Melting Point (C)	232 – 327° C
Appearance and Odor	Metallic Grey Soft Metal		

**SECTION IV – FIRE and EXPLOSIVE HAZARD DATA**

Flash Point (Method used) N/A	Flammable Limits N/A	LEL N/A	UEL N/A
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Extinguishing Media

Metal should not burn. However, if area where metal is stored or used is burning then water spray, for or standard foam is recommended.

Special Fire Fighting Procedures

When this material is heated to the point of vaporization then toxic fumes are amitted. Respiratory protection in the form of NIOHS/MSHA approved dust/fume respirator with high efficiency filters or if in conditions where unknown levels/types of contaminants are present then Self Contained Breathing Apparatus (SCBA) should be worn. Other appropriate protective equipment such as clothing and face protection should also be worm to protect the individual from splash or metal burns.

Unusual Fire and Explosion Hazards

Fire & explosion hazards are moderate when this material is in the form of dust & is exposed to heat or flames. When heated metal emits highly toxic fumes which can react vigorously with oxidizing materials. (see reactivity data.)

## SECTION V – HEALTH HAZARD DATA

<b>Routes of Entry:</b> <b>Inhalation</b> Only in vaporized condition	<b>Ingestion</b> Not at use in accordance to regulations	<b>Skin</b> Not in the current inorganic form. Only if converted to an organic form.
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### HEALTH HAZARD (ACUTE AND CHRONIC)

**LEAD:** Acute effects include (flu like symptoms) insomnia, weakness, constipation, nausea and abdominal pain. It is unlikely that occupationally related exposure to this material would result in an acute illness. However, if symptoms are present the individual should be removed from exposure and a physician consulted. For hot metal burns, the skin should be cooled with water and medical attention sought. Chronic effects may include kidney damage, nervous system involvement, hypertension and reproductive effects. Diseases of the blood and the blood-forming organs, kidneys and nervous and possibly reproductive systems may be aggravated by overexposure to lead. Exposure to lead may result in injury to a developing fetus.

**ANTIMONY:** Excessive exposure to antimony can cause dermatitis, eye irritation, pain and tightness in the chest, gastrointestinal disorders and neurological disturbances, such as irritability, sleeplessness, dizziness, and neuralgia. Encountered as low concentrations in tin/lead alloy foils, antimony normally should not produce the aforementioned effects.

**TIN:** Massive inhalation of tin dusts or fumes causes irritation of mucous membranes in the throat and lungs. Exposure to freshly generated fumes of tin can cause “metal fume fever”, a reversible condition with flu-like symptoms including chills and fever. Repeated exposures to sufficient quantities of tin can cause changes in the lung (a mild pneumoconiosis) with no distinctive fibrosis or disability.

**SILVER:** Chronic exposure may cause blue-grey discoloration of mucous membranes (argyria). No method is known, that will bleach the pigmentation. Encountered as low concentrations in tin/lead alloy foils, silver normally should not product the aforementioned effects.

### CARCINOGENICITY                      NTP (NO)                      IARC MONOGRAPHS (YES)

IARC classifies lead and some lead compounds as Group 2B carcinogens (possible carcinogenic to humans). This classification based primarily on the carcinogenicity of certain soluble lead salts in lab animals. Neither lead nor its insoluble salts appear to be carcinogenic to humans or lab animals.

### EMERGENCY AND FIRST AID PROCEDURES:

If symptoms indicate possible acute effects of the material, the individual should be removed from exposure and a physician consulted. Good hygiene practices should be followed. It is unlikely that occupational exposure will result in an acute illness; however, injury may result from hot metal burns if employees work with molten metal.

## SECTION VI – REACTIVITY DATA

STABILITY	Unstable	CONDITIONS TO AVOID
	Stable   X	Lead can react violently with oxidizing materials. Water may become trapped within surface cracks, which may cause an explosion when the material is molten.
INCOMPATABILITY (Materials to Avoid)		Strong oxidizing materials, e.g. chlorine trifluoride, hydrogen peroxide, sodium azide, sodium, and potassium
HAZARDOUS DECOMPOSTION PRODUCTS		Release of toxic materials at high temperatures.
HAZARDOUS POLYMERIZATION		CONDITIONS TO AVOID
Will not occur		N/A

**SECTION VII – PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps to be taken in case material is released or spilled:**

Material should be recovered for use or recycle by vacuuming, shoveling (if in pieces too large to vacuum) bobcat or wash down procedures. Dry sweeping methods should never be used because they may result in increased concentrations of airborne lead.

**Waste Disposal Method:**

Scrap or waste should be recycled if at all possible. If recycle is not possible then dispose of in accordance with federal, State, and local regulations.

**Precautions to be taken in handling and storing:**

Avoid inhalation of dust or fumes in concentration above OSHA limits. Avoid accidental ingestion by using good personal hygiene practices. Wash thoroughly before eating or smoking if lead has been handled.

**Other Precautions:**

Food and drink should not be consumed, tobacco products should not be used in areas where exposures exceed applicable limits.

**SECTION VIII – CONTROL MEASURE**

**RESPIRATORY PROTECTION** (*Specify Type*) A NIOSH/MSHA approved dust/fume respirator with high efficiency filters should be worn where applicable limits may be exceeded.

**VENTILATION :**

**Local Exhaust:** Adequate ventilation should be used when material is in molten or dusty state.

**Special:** N/A

**PROTECTIVE GLOVES:** Should be worn to reduce burn exposure. May be needed to prevent excessive skin contact that could result in inadvertent ingestion. Inorganic lead is not absorbed through intact skin.

**EYE PROTECTION** N/A

**OTHER PROTECTIVE CLOTHING OR EQUIPMENT:** Work clothes should be worn and laundered in accordance with OSHA lead standard 29CFR 1910-1025 (g) (2) (i).

Section 313 Supplier Notification:

Tin / Lead alloys may contain the following toxic chemical subject to the reporting requirements of section 313 of the Emergency Planning and Community Right to Know Act of 1986 (40CFR 372).

<b>CAS#</b>	<b>Chemical Name</b>	<b>Percent by weight</b>
7439-92-1	Lead	0 – 99.99%
7440-36-0	Antimony	0 – 6.0%
7440-31-5	Tin	0 – 99.9%
7440-22-4	Silver	0 – 5.0%

Check your alloy specification to determine which of the above chemicals are subject to the report.

Threshold reporting values are processing more than 25,000 # of the total alloy in the calendar year, or otherwise using more than 10,000# of the total alloy in a calendar year.