



1. IDENTIFICATION OF SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

PRODUCT NAME:	Tinman's Solder
USE:	A lead-antimony-tin alloy for use as an industrial solder. .
SUPPLIER	Premium Roofing Products Unit 2, Mill River Trading Estate Suez Road Enfield, Middlesex, EN3 7ZW
TEL:	07000 785780
FAX:	07000 785790

2. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT	EC N°	CAS N°	CONTENTS	SYMBOL LETTERS	R PHRASE N°
Lead		7439-92-1	Balance	NC	NC
Tin		744-31-0	39-40%	NC	NC
Antimony		7440-36-0	2.0-2.4	NC	NC

3. HAZARDS IDENTIFICATION

MAIN HAZARDS:	The alloy in solid, metallic form as stick or ingots is unlikely to be hazardous.
OTHER HAZARDS:	Lead is a toxic metal. Hazardous fumes and oxidic compounds (drosses) of lead and antimony may be produced when the alloy is melted. Where exposure to lead compounds is significant, medical examination prior to and after such exposure is a statutory requirement.

4 FIRST-AID MEASURES

NOTE: Inhalation, skin contact and eye contact measures will not be relevant to the product in its solid, metallic form and only refer to fumes and drosses derived from melting the alloy.

INHALATION:	Move exposed person to fresh air at once. Get medical attention promptly.
INGESTION:	Do not induce vomiting. If person is conscious, rinse mouth thoroughly and encourage the drinking of large quantity of water. Get medical attention immediately.
SKIN CONTACT:	Remove all contaminated clothing and footwear immediately, unless it is stuck to the skin. Wash the affected skin immediately with soap and water. Get medical attention if irritation persists.
EYE CONTACT:	Make sure that any contact lenses are removed from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eyelids. Get medical attention immediately.

5. FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA:	The product is not flammable. However, hot, liquid metal may cause other materials in its vicinity to ignite. Use dry foam, sand or carbon dioxide. Do not use water near liquid metal.
EXPOSURE HAZARDS:	In a fire, highly toxic fumes may be produced.
PROTECTION OF FIRE-FIGHTERS	Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:	No special measures necessary with solid alloy.
ENVIRONMENTAL PRECAUTION:	Ensure that spilled material is kept away from concentrated acids.
CLEAN-UP PROCEDURES:	Pick up small pieces carefully. Wet mop or vacuum and dispose of as special waste.

7. HANDLING AND STORAGE

HANDLING PRECAUTIONS: Observe normal hygiene precautions when handling solid, metallic product. Avoid inhalation of fumes that may be emitted during soldering.

STORAGE PRECAUTIONS: Store in a cool, dry place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMIT VALUES:	INGREDIENT	CAS N°	LTEL (8 hrs TWA)	STEL (15 min)
	Lead	7439-92-1	0.15 mg. m ⁻³	-
	Tin	744-31-0	2 mg. m ⁻³	4 mg.m ⁻³
	Antimony	7440-36-0	0.5 mg. m ⁻³	-

VENTILATION: If working with molten metal indoors, use engineering controls to reduce air contamination to permissible exposure level.

RESPIRATORY PROTECTION: Wear dust masks in dusty areas.

HAND PROTECTION: Wear chemical resistant gloves in cases of prolonged or repeated contact.

EYE PROTECTION: Use approved safety goggles or face shield to protect against molten metal.

SKIN PROTECTION: Wear appropriate clothing in cases of repeated or prolonged exposure to molten metal. Follow standard hygiene procedures.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Silver/grey metal	ODOUR:	None
MELTING POINT:	185-227°C	FLASH POINT:	N/A
RELATIVE DENSITY:	9.19 @ 20°C	SOLUBILITY (in water):	Insoluble.

10 STABILITY AND REACTIVITY

STABILITY: Stable under normal conditions. Stable at room temperature.

CONDITIONS TO AVOID: No special measures necessary.

MATERIALS TO AVOID: Avoid molten metal contact with water and acids.

HAZARDOUS DECOMPOSITION PRODUCTS: Toxic fumes can be produced when alloy is in molten state. Antimony will react with concentrated acids to form stibine, which is highly toxic.

11. TOXICOLOGICAL INFORMATION

NOTE: Inhalation, skin contact and eye contact with the solid, metallic product should be of insignificant toxicological impact and the hazards below will only refer to fumes and drosses derived from melting the alloy.

INHALATION: Lead compounds: could cause constipation, abdominal pain and nausea.
Antimony compounds: could cause sore throat and shortness of breath.

INGESTION: Lead and lead compounds: could cause constipation, abdominal pain and nausea.
Antimony and antimony compounds: could cause abdominal pain and nausea.

SKIN CONTACT: Lead compounds: prolonged contact could lead to absorption into the blood stream.
Antimony compounds: prolonged contact could lead to absorption into the blood stream

EYE CONTACT: Lead compounds: prolonged contact could lead to absorption into the blood stream.
Antimony compounds: prolonged contact could lead to absorption into the blood stream

Prolonged exposure to lead compounds may cause central nervous system damage, gastrointestinal disturbances, anaemia and wrist droop. Kidney dysfunction has also been associated with chronic lead poisoning. Prolonged exposure to antimony may cause pulmonary oedema, and lung fibrosis.

12. ECOLOGICAL INFORMATION

MOBILITY: The product in solid, metallic form is not considered mobile. Drosses however, can be dispersed either through the atmosphere or through water courses.

PERSISTENCE AND DEGRADABILITY: Not biodegradable.

BIOACCUMULATIVE POTENTIAL: Drosses may have bioaccumulation potential.

OTHER ADVERSE EFFECTS: Drosses are toxic to aquatic organisms.

13. DISPOSAL CONSIDERATIONS

WASTE FROM RESIDUES:	Recover, reclaim or recycle if practicable. Dispose of drosses as hazardous waste. Dispose of in accordance with local authority requirements.
CONTAMINATED PACKAGING:	Not applicable.

14. TRANSPORT INFORMATION:

Not classified as hazardous to transport.

15. REGULATORY INFORMATION

LABEL FOR SUPPLY:	None required.
RISK PHRASES:	Not classified in solid, metallic form.
SAFETY PHRASES:	Not classified in solid, metallic form.
STATUTORY INSTRUMENT:	Chemicals (Hazards Information and Packaging) Regulations 2002; SI 2002/1689. Control of Substances Hazardous to Health 1999; SI 1000/437. Control of Lead at Work Regulations 2002; SI 2002/2676.
APPROVED CODES OF PRACTICE:	Classification and Labelling of Substances and Preparations Dangerous for Supply. The Compilation of Safety Data Sheets (3 rd Edition).
GUIDANCE:	Antimony and its Compounds: Health and Safety Precautions EH19 Occupational Exposure Limits EH40. COSHH Essentials: Easy steps to control chemicals. Control of Substances Hazardous to Health Regulations; HSG193. CHIP for Everyone HSG108.

16. OTHER INFORMATION

TEXT OF RISK PHRASES USED IN SECTION 2: Not classified in solid, metallic form.

Risk and Safety Phrases for inorganic lead and antimony compounds are as follows:

RISK PHRASES:

Lead compounds:	R20/22	Harmful by inhalation and if swallowed.
	R33	Danger of cumulative effects.
	R50/53	Very toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.
	R61	May cause harm to the unborn child.
Antimony compounds:	R62	Possible risk of impaired fertility.
	R20/22	Harmful by inhalation and if swallowed.
Antimony compounds:	R51/53	Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment

SAFETY PHRASES:

Lead compounds:	S45	In case of accident or if you feel unwell seek medical advice immediately (show the label where possible)
	S53	Avoid exposure – Obtain special instructions before use.
	S60	The material and its container must be disposed of as hazardous waste.
	S61	Avoid release to the environment. Refer to special instructions/safety data sheet.
Antimony compounds:	S2	Keep out of the reach of children
	S61	Avoid release to the environment. Refer to special instructions/safety data sheet.

The contents of this Safety Data Sheet are not warranted to be accurate or complete and the Company can accept no liability to any customer, their employees or any other person whatsoever for any loss, injury or damage, whether direct or consequential, which may be caused by any error or omission from this sheet, whether such error or omission is negligent or otherwise.
