THE HARRIS PRODUCTS GROUP

Reviewed on 16/03/2022

Safety Data Sheet

1 IDENTIFICATION

Product identifier

Trade name: **63/37 Tin/Lead Solder**
Part No.: SOL6337REUTEC

Other means of identification: Solder Paste
SDS Number: 03-2

Recommended use and restriction on use
Recommended use: Solder Paste for universal application

Manufacturer/Importer/Supplier/Distributor information
Importer:
NEW ZEALAND
Harris Products Group
Unit 16, 232 Ellis St
Frankton, Hamilton
New Zealand 3204
(06) 83405875
Safety Data Sheet Questions: sales@harrisnz.com
Website: http://www.harrisproductsgroup.co.nz

New Zealand National Poisons Centre/Helpline (24 hours) 0800 POISON (0800 764 766)
Fire Service - Ambulance – 111

AUSTRALIA
Harris Products Group
14 Queensland Rd
Darra, QLD, Australia 4076
(07) 33753670
Safety Data Sheet Questions: sales@hgea.com.au
Website: http://www.harrisproductsgroup.com.au

2 HAZARD(S) IDENTIFICATION

GHS classification of the substance/mixture.
Classified according to the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

HARMFUL BY INHALATION AND IF SWALLOWED. DANGER OF CUMULATIVE EFFECTS

Classification of the substance or mixture
Acute toxicity – oral – Category 4

Label Elements
GHS label elements

Harmful if swallowed
GHS07

Health Hazard
GHS08 HEALTH HAZARD

Aquatic Hazard
GHS09 ENVIRONMENT

Signal Word **DANGER - LEAD**

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Precautionary Statement

H302 &332	Harmful if swallowed or inhaled
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H373	May damage organs
H411	Toxic to aquatic life with long lasting effects

Prevention

P260	Do not breath in dust, gas, mist, fumes, vapours, sprays
P273	Avoid release to the environment
P264	Wash thoroughly after handing

Response

P301 & P312	If swallowed call the POISON CENTRE or doctor
P314	If feel unwell: get medical advice

Storage

P405	Lock up storage

Disposal

P501	Dispose in accordance with local authority regulations

Additional information:
Other hazards which do not result in GHS classification:
Health = 2
Fire = 1
Reactivity = 0

Results of PBT and vPvB assessment
Not applicable

3 Composition/information on ingredients

Chemical characterization: Mixtures
Description: Mixture: consisting of the following components.

Dangerous components:		
CAS	Name	Proportion
7440-31-5	tin	60 – 100%
7439-92-1	lead	30 - 60%

Composition comments:
This solder product does not contain any Substance of very High Concern on the European Chemicals Agency List.
Composition and weight percent of solder alloys varies and can be determined by product label.

4 First Aid Measures

Skin Exposure
Immediately wash with water and soap and rinse thoroughly. Remove contaminated clothing. Wash the skin immediately with soap and water. Get medical attention promptly if symptoms occur after washing.
Eye Exposure
Remove victim immediately from source of exposure. Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes and get medical attention.

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Inhalation
Move the exposed person to fresh air at once. Get medical attention. Provide rest, warmth and fresh air. When breathing is difficult, properly trained personnel may assist affected person by administering 100% oxygen.
Ingestion
If swallowed do not induce vomiting and call physician immediately! Do not induce vomiting unless directed by medical personnel. Remove victim immediately from source of exposure. Drink plenty of water. Get medical attention immediately! Provide rest, warmth and fresh air.
Medical conditions aggravated from exposure
Skin, respiratory, and kidney disorders may be aggravated by prolonged over-exposures to the dusts or fumes generated by these products.
Recommendations to physicians
Treat symptoms and eliminate overexposure. Call for medical aid. Employ first aid techniques recommended by the Australian Red Cross

5 Fire-fighting measures

Extinguishing media
Suitable extinguishing equipment:
Dry chemicals, sand, dolomite etc. CO2, extinguishing powder or water spray.

Special hazards arising from the product
Fire or high temperatures over 1000°F create: Toxic gases/vapours/fumes of: Lead and Tin
In case of fire the following can be released: Carbon Monoxide and Carbon Dioxide

Special protective equipment and precautions for fire fighters
Wear breathing apparatus plus protective gloves in event of a fire.
Use fire fighting procedures suitable for surrounding area.

Additional information
Read and understand the Work Safe Australia Code of Practice on Welding Processes and “Standard for Fire Prevention During Welding, Cutting and Other Hot Work” before using this product. Section 274 of the Work Health and Safety Act (the WHS Act.)

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures
Ensure adequate ventilation
Environmental precautions
Prevent waste from contaminating surrounding environment. Discard any product residue, disposable container or liner in environmentally acceptable manner, in full compliance with federal, state, and local regulations.
Methods and materials for containment and cleaning up.
Clean up spills immediately. Melted solder will solidify on cooling and can be scraped up.

Wear protective clothing, safety eyewear, dust mask and protective gloves.
Secure load if safe to do so and bundle recoverable product.

7 Handling and storage

Handling:
Precautions for safe handling
Ventilate well, avoid breathing vapours. Prevent formation of dust.

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Ensure exhaust system at the workplace or well ventilated area.
Wear protective clothing and equipment – Section 8

Conditions for safe storage, including any incompatibilities
Store in original containers if possible
Store in a cool, dry, well ventilated area
Use suitable containers – keep receptacle tightly sealed.
Exposure to sulphur or to high humidity will tarnish solder surface.

8 Exposure controls/personal protection

Exposure controls

Source	Material	TWA mg/m³	STEL mg/m³
Australia Exposure Standards	Lead	0.15 mg/m³ - 8 hrs	No std.
Australia Exposure Standards	Tin	2 - 8 hrs	4 – 15 mins

Engineering Controls
Tin
2mg/m³ - Whenever possible the use of local exhaust ventilation or other engineering controls is the preferred method of controlling exposure to airborne dust and fume to meet established occupational exposure limits. Use good housekeeping and sanitation practices. Do not use tobacco or food in work area. Wash thoroughly before eating or smoking. Do not blow dust off clothing or skin with compressed air.

Lead can become an airborne contaminant when soldering and welding materials. A welder may be exposed to lead when welding on steel painted with leaded paints, on leaded steel, flame cutting of batteries and materials contaminated with lead (for example, old automotive mufflers). The major risk associated with lead is lead poisoning (plumbism). This affects the blood system and can cause anaemia. Other symptoms include abdominal pain, convulsions, hallucinations, coma, weakness, tremors and the possible increased risk of cancer. Lead exposure can also affect both male and female reproductive systems. A developing foetus is particularly at risk, especially in the early weeks before a pregnancy becomes known.

Under the WHS Regulations a process by which electric arc, oxyacetylene, oxy gas, plasma arc or a flame is applied for welding, cutting or cleaning, to the surface of metal coated with lead or paint containing more than 1 per cent by dry weight of lead metal is defined as a lead process.

This means certain requirements in the WHS Regulations apply including identifying lead risk work and removing a worker from lead risk work in certain circumstances.
The WHS Regulations requires

- ensure so far as is reasonably practicable that lead is confined to a lead process area at the workplace and that, the lead process area is kept clean
- ensure that methods used to clean a lead process area do not create a risk to health of persons in the immediate vicinity or have the potential to spread the contamination of lead
- take all reasonable steps to ensure that a person does not eat, drink, chew gum, smoke or carry materials used for smoking in a lead process area
- provide and maintain clean changing rooms, washing, showering and toilet facilities
- provide workers with eating and drinking facilities that, so far as is reasonably practicable, cannot be contaminated with lead from a lead process
- ensure that workers remove clothing and equipment that is or likely to be contaminated with lead and wash their hands and faces before entering an eating or drinking area.

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The WHS Regulations also specify control measures for the laundering, disposal and removal of personal protective equipment that is likely to be contaminated with lead dust. There are also specific notification requirements under the WHS Regulations for notifying the regulator within 7 days that lead risk work is being undertaken.

Personal protective equipment:
Respiratory Measures
When ventilation is not sufficient to remove airborne levels from the breathing zone, a NIOSH safety approved respirator or Self-contained breathing apparatus should be worn. Consult with local procedures for selection, training, inspection and Maintenance of the personal protective equipment.

Ventilation
Use enough ventilation, local exhaust ventilation to control airborne levels below recommended exposure limits.

Breathing equipment:
Use appropriate engineering control such as process enclosures, local exhaust ventilation to control Airborne levels below recommended exposure limits.
When ventilation is not sufficient to remove airborne levels from the breathing zone, a NIOSH safety approved respirator or Self-contained breathing apparatus should be worn. Consult with local procedures for selection, training, inspection and Maintenance of the personal protective equipment.

Protection of hands:

Thermally-protective gloves.

Suitable gloves can be recommended by the glove supplier.
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Eye protection:

Wear approved safety goggles when refilling.

Body protection:
Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact.

Limitation and supervision of exposure into the environment No special requirements.

Risk management measures: DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. Wash promptly with soap & water if skin becomes contaminated. Use appropriate skin cream to prevent drying of skin. No eating or drinking while working with this material.

9 Physical and chemical properties

Information on basic physical and chemical properties
General Information
Appearance: Metal or metallic
Colour: Silver
Odour: Odourless

Odour	Odourless	**Flammability**	Not Determined

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Odour Threshold	Not Available	**Flash Point**	Undetermined
pH	Not Determined	**Auto Igniting**	Not Self Igniting
Melting point/range	183 C° – 185 C°	**Vapour Pressure**	Not Applicable
Boiling point & boiling range	1740 C° (3164 F°)	**Danger of explosion**	Does not present hazard
Density at 20°C (68°F)	8.25	**Solubility in/miscibility with water**	Insoluble

10 Stability and reactivity

Reactivity: No dangerous reactions known
Chemical stability: Thermal decomposition /conditions to be avoided: No decomposition if used according to specifications.
Conditions to avoid: No further relevant information available.
Incompatible materials: Strong acids, strong oxidizers.
Hazardous decomposition products:
Carbon monoxide and carbon dioxide
When heated to soldering temperatures, the solvents are evaporated and rosin may be thermally degraded to Liberate aliphatic aldehydes and acids.

11 Toxicological information

Acute Toxicity
CHRONIC HEALTH EFFECTS
Acute toxicity:
Primary irritant effect:
On the skin:
Irritant to skin and mucous membranes.
Possible local irritation by contact with flux or fumes.
On the eye:
Irritant effect.
Smoke during soldering can cause eye irritation.
Additional toxicological information:
The product shows the following dangers according to internally approved calculation methods for preparations: Irritant
Harmful
Carcinogenic categories
IARC (International Agency for Research on Cancer)
Lead 7439-92-1
NTP (National Toxicology Program)
Lead 7439-91-1

MIXTURE OF CHEMICALS

CHEMICAL	TOXICITY LEVELS	IRRITATION
Lead	Males 40µg/dL (1.93µmol/L); Females 10µg/dL (0.48µmol/L)	Not Available
Lead	Carcinogenicity Category 1A – May cause cancer	
Lead	Reproductive Toxicity Category 1A – may damage the unborn child, suspected of damaging fertility	
Tin	Dermal (rat) LD50: >2000 mg/kg[1] Oral (rat) LD50: >2000 mg/kg[1]	Not Available

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12 Ecological information

General notes:
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.

Ingredient	Result	Species	Exposure
Lead – (7439-92-1)	Acute EC50 105 ppb Marine water	Algae - Chaetoceros sp. - Exponential growth phase	72 hours
	Acute EC50 0.489 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 8000 µg/l Fresh water	Aquatic plants - Lemna	4 days
	Acute LC50 530 µg/l Fresh water	minor Crustaceans - Ceriodaphnia reticulata	48 hours
	Acute LC50 4400 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 0.44 ppm Fresh water	Fish - Cyprinus carpio - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Chronic NOEC 0.25 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.03 µg/l Fresh water	Fish - Cyprinus carpio	4 weeks
Tin - (7440-31-5)	Not Available	Not Available	Not Available

PBT and vPvB assessment Not applicable
Other adverse effects
No data available.

13 Disposal considerations

Waste treatment methods
Recommendation:
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Disposal must be made according to official regulations.
Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.

14 Transport Information

HAZCHEM	Not Applicable
UN-Number DOT, ADR, ADN, IMDG, IATA	Not Regulated
UN proper shipping name DOT, ADR, ADN, IMDG, IATA	Not Regulated
Transport hazard class(es) DOT, ADR, ADN, IMDG, IATA Class	Not Regulated
Packing group DOT, ADR, IMDG, IATA	Not Regulated
Marine pollutant:	No
Special precautions for user	Not applicable.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
UN "Model Regulation":	Not regulated.

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15 Regulatory information

Product Name: 63/37 Tin/Lead Solder

Label for supply: NL No label required
Tin – Not applicable
Lead – Chemicals known to cause cancer
Chemicals known to reproductive toxicity

Risk Phrases: R-20/22 Harmful by inhalation and if swallowed.
R-33 Danger of cumulative effects
S-20 When using do not eat or drink
Safety Phrases: S-13 Keep away from food, drink and animal feeding stuffs
S-23 Do not breathe gas/fumes/vapour/spray

Refer to the Australian Inventory of Chemical Substances – AICS at https://www.nicnas.gov.au/chemicals-on-AICS#main

Poison schedule: Classified as a Schedule 6 (S6) Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP). https://www.legislation.gov.au/Details/F2016L01638

Classifications: Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals.
The classifications and phrases listed below are based on the Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008(2004)].

16 Other information

References
Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice

Standard for the Uniform Scheduling of Medicines and Poisons

Australian Code for the Transport of Dangerous Goods by Road & Rail.
Modell Work Health and Safety Regulations, Schedule 10: Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.

Workplace exposure standards for airborne contaminants, Safe work, Australia

American Conference of Industrial Hygienists (ACGIIH)

Globally Harmonised System of classification and labelling of chemicals.

WELDING (1): Due to the diversity of welding techniques, processes, materials used, nature of the surface being welded and the presence of contaminants, the fumes & gases associated with welding will vary in composition and quantity. When assessing a welding process, the toxic fumes generated may not only be associated with the parent metal, filler wire or electrode. The welding/cutting arc may generate nitrogen oxides, carbon monoxide & other gases, whilst UV radiation emitted from some arcs generates ozone. Ozone may irritate mucous membranes and cause pulmonary oedema & haemorrhage. Shielding gases (e.g. carbon dioxide and inert gases i.e. argon and helium) in high concentrations, in confined spaces, may reduce oxygen in the atmosphere to dangerous levels, resulting in possible asphyxiation.

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WELDING (2): In addition to complying with individual exposure standards for specific contaminants, where current manual welding processes are used, the fume concentration inside the welder's helmet should not exceed 5 mg/m³ (unless otherwise classified) when collected in accordance with Australian Standard AS 3853.1: Fume from welding and allied processes - Guide to methods for the sampling and analysis of particulate matter and AS 3853.2: Fume from welding and allied processes - Guide to methods for the sampling and analysis of gases. Airway irritation and metal fume fever are the most common acute effects from welding fumes. Reported to cause reduced sperm quality in welders.

WELDING (3): Other gases and fumes associated with welding processes include: Inert shielding gases (e.g. argon, carbon dioxide, helium) which may reduce the atmospheric oxygen content in poorly ventilated areas. UV-radiation and Infra-Red radiation may decompose chlorinated degreasing agents to form highly toxic and irritating phosgene gas. This may occur if a metal has been degreased but inadequately dried or when vapours from a nearby degreasing bath enter the welding zone.

WELDING (4): Welding fumes may contain a wide variety of chemical contaminants, including oxides and salts of metals and other compounds which may be generated from electrodes, filler wire, flux materials and from the welded material (e.g. painted surfaces). Welding stainless-steel and its alloys generates nickel and chromium (VI) compounds. Welding fumes are retained in the lungs. Sparingly soluble compounds may be released slowly from the lungs. Welding fume is classified as possibly carcinogenic to humans (IARC Group 2B).

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:
The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

Disclaimer:
We urge each end user and recipient of this SDS to study it carefully. If necessary, consult an industrial hygienist or other expert to understand this information and safeguard the environment and protect workers from potential hazards associated with the handling or use of this product.
Harris Products Group cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for use, handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

WARNING: PRODUCT COMPONENTS PRESENT HEALTH AND SAFETY HAZARDS. READ AND UNDERSTAND THIS SAFETY DATA SHEET (S.DS.). ALSO, FOLLOW YOUR EMPLOYER'S SAFETY PRACTICES.
The information contained herein relates only to the specific product. If the product is combined with other materials, all component properties must be considered. **BE SURE TO CONSULT THE LATEST VERSION OF THE SDS. SAFETY DATA SHEETS ARE AVAILABLE FROM HARRIS PRODUCTS GROUP** Harris Products Group, HGE PTY LTD, Brisbane | Melbourne | Perth | New Zealand, 14 Queensland Rd, Darra, QLD 4076, Phone: (07) 3375 3670 | Fax: (07) 3375 3620, Email: sales@hgea.com.au, www.harrisproductsgroup.com.au,
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