

1 Identification of the substance/mixture and of the company/undertaking

Product identifier

Trade name: EM923 SnAgCu

Relevant identified uses of the substance or mixture and uses advised against Solder

Application of the substance / the preparation Solder paste

Details of the supplier of the safety data sheet

This Safety Data Sheet has been updated in accordance with the Global Harmonized System (GHS).

Manufacturer/Supplier:

Kester Components Pte Ltd

500 Chai Chee Lane

Singapore 469024

Tel: 65-64491133

Further information obtainable from: SDS Coordinator (630) 616-6844

Emergency telephone number:

CHEMTREC 24-Hour Emergency Response Telephone Number: (800) 424-9300

CHEMTREC 24-Hour Emergency Response (Outside US & Canada) : (703) 527-3887

2 Hazards identification

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



GHS08 health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.



GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Skin Sens. 1 H317 May cause an allergic skin reaction.

Label elements

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms



GHS05 GHS08

Signal word **Danger**

Hazard-determining components of labelling:

2-(2-hexyloxyethoxy)ethanol

Denatured Acid Hydrogenation Gum Resin

Hazard statements

H318 Causes serious eye damage.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317 May cause an allergic skin reaction.

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Precautionary statements

- P285 In case of inadequate ventilation wear respiratory protection.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/physician.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards

Results of PBT and vPvB assessment








PBT: Not applicable.
vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 7440-31-5 EINECS: 231-141-8	tin	50-100%
CAS: 112-59-4 EINECS: 203-988-3	2-(2-hexyloxyethoxy)ethanol  Eye Dam. 1, H318  Acute Tox. 4, H312	2.5-10%
CAS: 144413-22-9	Denatured Acid Hydrogenation Gum Resin  Resp. Sens. 1, H334  Skin Sens. 1, H317	2.5-10%
CAS: 7440-22-4 EINECS: 231-131-3	silver	2.5-10%
	Proprietary Carboxylic Acid  Eye Irrit. 2, H319	≤ 2.5%
CAS: 8016-28-2 EINECS: 232-405-5	Lard Oil	≤ 2.5%
CAS: 65997-06-0	Modified Rosin  Resp. Sens. 1, H334  Skin Sens. 1, H317	≤ 2.5%

SVHC

This product does not contain any Substance of Very High Concern (SVHC) on the European Chemicals Agency (ECHA) candidate list.

Additional information: Solder powder is typically 85-92% of the solder paste composition.

4 First aid measures

Description of first aid measures

- After inhalation:** Supply fresh air; consult doctor in case of complaints.
After skin contact: Immediately wash with water and soap and rinse thoroughly.
After eye contact: Rinse opened eye for several minutes under running water.
After swallowing: Seek immediate medical advice.

Information for doctor:

Most important symptoms and effects, both acute and delayed No further relevant information available.
Indication of any immediate medical attention and special treatment needed No further relevant information available.

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5 Firefighting measures**Extinguishing media***Suitable extinguishing agents: CO₂, sand, extinguishing powder. Do not use water.***Special hazards arising from the substance or mixture***In case of fire, the following can be released:**Carbon monoxide (CO)**Carbon dioxide (CO₂)**Aliphatic aldehydes***Advice for firefighters****Protective equipment:** *Wear self-contained respiratory protective device.***6 Accidental release measures****Personal precautions, protective equipment and emergency procedures** *Ensure adequate ventilation***Environmental precautions:** *Do not allow to enter sewers/ surface or ground water.***Methods and material for containment and cleaning up:***Dispose contaminated material as waste according to item 13.**Ensure adequate ventilation.**Scoop up paste and deposit in appropriate containers. Remove residual with glycol ether solvent.***Reference to other sections***See Section 7 for information on safe handling.**See Section 8 for information on personal protection equipment.**See Section 13 for disposal information.***7 Handling and storage****Handling:****Precautions for safe handling***Prevent formation of aerosols.**Wash hands after handling paste and before eating or smoking. Care should be taken to remove paste from under fingernails.***Information about fire - and explosion protection:** *No special measures required.***Conditions for safe storage, including any incompatibilities****Storage:***Requirements to be met by storerooms and receptacles:**Store at or near 5°C in a dry location.**Store at 0-10°C in dry location**Information about storage in one common storage facility: Not required.**Further information about storage conditions: None.***Specific end use(s)** *No further relevant information available.***8 Exposure controls/personal protection****Additional information about design of technical facilities:** *No further data; see item 7.*

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Control parameters

Ingredients with limit values that require monitoring at the workplace:

7440-31-5 tin

PEL (USA)	Long-term value: 2 mg/m ³ metal
REL (USA)	Long-term value: 2 mg/m ³
TLV (USA)	Long-term value: 2 mg/m ³ metal
TLV (Taiwan)	Long-term value: 2 mg/m ³ and its inorganic compounds

7440-22-4 silver

WEL (Great Britain)	Long-term value: 0.1 mg/m ³
PEL (USA)	Long-term value: 0.01 mg/m ³
REL (USA)	Long-term value: 0.01 mg/m ³
TLV (USA)	Long-term value: 0.1 mg/m ³ metal
TLV (Taiwan)	Long-term value: 0.01 mg/m ³ metal dust, soluble compounds and fume (as Ag)

Exposure controls

Personal protective equipment:

General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Respiratory protection:

When ventilation is not sufficient to remove fumes from the breathing zone, a safety approved respirator or self-contained breathing apparatus should be worn.

Protection of hands:



Protective gloves

Material of gloves

Nitrile rubber, NBR

Natural rubber, NR

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection: Safety Glasses with Side Shields Required

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:

Form:	Pasty
Colour:	Silver grey
Odour:	Mild

pH-value: Not determined.

Change in condition

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: Undetermined.

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Flash point: > 55°C (> 131 °F)
Self-igniting: Product is not selfigniting.
Danger of explosion: Product does not present an explosion hazard.
Density: Not determined.
Solubility in / Miscibility with water: Not miscible or difficult to mix.

10 Stability and reactivity

Reactivity

Chemical stability

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

Possibility of hazardous reactions No dangerous reactions known.

Conditions to avoid No further relevant information available.

Incompatible materials: Strong acids, strong oxidizers.

Hazardous decomposition products:

Carbon monoxide and carbon dioxide

When heated, the solvents are evaporated and rosin may be thermally degraded to liberate aliphatic aldehydes, acids, and terpenes.

11 Toxicological information

Information on toxicological effects

Acute toxicity:

LD/LC50 values relevant for classification:

65997-06-0 Modified Rosin

Oral	LD50	> 4000 mg/kg (Rat)
Dermal	LD50	>2500 mg/kg (rabbit)

Primary irritant effect:

on the skin:

Irritant to skin and mucous membranes.

Possible local irritation by contact with flux or fumes.

on the eye:

Irritating effect.

Smoke during soldering can cause eye irritation.

Sensitization:

Sensitization possible through inhalation.

Sensitization possible through skin contact.

12 Ecological information

Toxicity

Acquatic toxicity: No further relevant information available.

Additional ecological information:

General notes:

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Results of PBT and vPvB assessment

PBT: Not applicable.

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vPvB: Not applicable.

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13 Disposal considerations

Waste treatment methods

Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system. Disposal must be made according to official regulations.

Uncleaned packaging:

Recommendation: Disposal must be made according to official regulations.

14 Transport information

Land transport ADR/RID (cross-border)

ADR/RID class: -
Not regulated.

Maritime transport IMDG:

IMDG Class: -
Not regulated.

Marine pollutant: No

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA Class: -
Not regulated.

Special precautions for user Not applicable.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

Labelling according to Regulation (EC) No 1272/2008

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Hazard pictograms



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Signal word *Danger*

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P310 Immediately call a POISON CENTER or doctor/physician.
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Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained herein is based on data considered accurate and is offered solely for information, consideration and investigation. Kester extends no warranties, makes no representations and assumes no responsibility as to the accuracy, completeness or suitability of this data for any purchaser's use. The data on this Material Safety Data Sheet relates only to this product and does not relate to use with any other material or in any process. All chemical products should be used only by, or under the direction of, technically qualified personnel who are aware of the hazards involved and the necessity for reasonable care in handling. Hazard communication regulations require that employees must be trained on how to use a Material Safety Data Sheet as a source for hazard information.

Department issuing MSDS: Product Safety**Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

NFPA: National Fire Protection Association (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent