

## 1: PRODUCT AND COMPANY IDENTIFICATION

**Trade name:** **EM919G SnAgCu**

**Application of the substance / the preparation:** Solder paste

### 1.3 Details of the supplier of the safety data sheet

**Manufacturer/Supplier:**

Kester Inc.  
800 West Thorndale Avenue  
Itasca, IL 60143  
Tel (630) 616-4000

ITW Specialty Materials (Suzhou) Co., Ltd.  
Heng Qiao Road  
Wujiang Economic Development Zone  
Suzhou, Jiangsu 215200 China  
Tel +86 512 82060808

**Information department:** Product Compliance: EHS\_Kester@kester.com

### 1.4 Emergency telephone number:

CHEMTREC 24-Hour Emergency Response Telephone Number : (800) 424-9300  
CHEMTREC 24-Hour Emergency Response (Outside US & Canada) Telephone Number : (703) 527-3887

## 2: HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008**



GHS08 Health hazard

Carc. 1B H350 May cause cancer.



GHS07

Acute Tox. 4 H312 Harmful in contact with skin.  
Skin Sens. 1 H317 May cause an allergic skin reaction.

### 2.2 Label elements

**Labelling according to Regulation (EC) No 1272/2008**

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

#### Hazard pictograms



GHS07 GHS08

**Signal word** Danger

#### Hazard-determining components of labeling:

Arylmulticarboxylic acid compound with arylimidazoline  
Rosin  
Distillates (petroleum), hydrotreated middle

#### Hazard statements

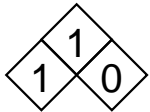
Harmful in contact with skin.  
May cause an allergic skin reaction.  
May cause cancer.

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**Precautionary statements**

Avoid breathing dust/fume/gas/mist/vapors/spray  
Wear protective gloves / protective clothing.  
Contaminated work clothing must not be allowed out of the workplace.  
Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Specific treatment (see on this label).  
Call a POISON CENTER/doctor if you feel unwell.  
Wash contaminated clothing before reuse.  
IF exposed or concerned: Get medical advice/attention.  
If skin irritation or rash occurs: Get medical advice/attention.  
IF ON SKIN: Wash with plenty of water.  
Take off contaminated clothing and wash it before reuse.  
Store locked up.  
Dispose of contents/container in accordance with local/regional/national/international regulations.

**Hazard description:****WHMIS Symbols****Classification system:****NFPA ratings (scale 0 - 4)**

Health = 1  
Fire = 1  
Reactivity = 0

**HMIS-ratings (scale 0 - 4)**

HEALTH	*1
FIRE	1
REACTIVITY	0

Health = \*1  
Fire = 1  
Reactivity = 0

**2.3 Other hazards****Results of PBT and vPvB assessment**

PBT: Not applicable.

vPvB: Not applicable.

**3: COMPOSITION OF MIXTURE**

Description: Mixture of the substances listed below with nonhazardous additions.

CAS No.	Description	% Range
CAS: 7440-31-5 EINECS: 231-141-8	TIN (Sn)	70-85%
	Rosin ⚠ Skin Sens. 1, H317	3.0-5.0%
CAS: 7440-22-4 EINECS: 231-131-3	SILVER (Ag)	1.0-3.0%
CAS: 54553-90-1	Arylmulticarboxylic acid compound with arylimidazoline ⚠ Acute Tox. 3, H311 ⚠ Acute Tox. 4, H332; Eye Irrit. 2A, H319	1.0-3.0%
CAS: 9016-45-9	Poly(oxy-1,2-ethanediyl), alpha- (nonylphenyl)- omega- hydroxy- ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2A, H319	1.0-3.0%

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CAS: 64742-46-7	Distillates (petroleum), hydrotreated middle	1.0-3.0%
EINECS: 265-148-2	☠ Carc. 1B, H350	

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

#### 4: FIRST AID MEASURES

##### 4.1 Description of first aid measures

**General information:** Follow general first aid procedures.

**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.

**4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

**4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

#### 5: FIREFIGHTING MEASURES

##### 5.1 Extinguishing media

**Suitable extinguishing agents:**

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

##### 5.2 Special hazards arising from the substance or mixture

In case of fire, the following can be released:

Carbon monoxide (CO)

Carbon dioxide (CO<sub>2</sub>)

Aliphatic aldehydes

##### 5.3 Advice for firefighters

**Protective equipment:** Wear self-contained respiratory protective device.

#### 6: ACCIDENTAL RELEASE MEASURES

**6.1 Personal precautions, protective equipment and emergency procedures** Ensure adequate ventilation

##### 6.2 Environmental precautions:

Do not allow product to reach sewage system or any water course.

Do not allow to enter sewers/ surface or ground water.

##### 6.3 Methods and material for containment and cleaning up:

Dispose contaminated material as waste according to item 13.

Scoop up paste and deposit in appropriate containers.

##### 6.4 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

##### 7.1 Precautions for safe handling

Open and handle receptacle with care.

Wash hands after handling paste and before eating or smoking. Care should be taken to remove paste from under fingernails.

**Information about protection against explosions and fires:** Keep respiratory protective device available.

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**7.2 Conditions for safe storage, including any incompatibilities**

**Storage:**

**Requirements to be met by storerooms and receptacles:**

Store in a cool location.

Store at or near 5°C in a dry location.

**Information about storage in one common storage facility:** Not required.

**Further information about storage conditions:** Keep receptacle tightly sealed.

**7.3 Specific end use(s)**

Shelf life is 6 months from date of manufacture when stored at 0-10 °C (32-50°F).

No further relevant information available.

**8: EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Additional information about design of technical systems:** No further data; see item 7.

**8.1 Control parameters**

**Components with limit values that require monitoring at the workplace:**

**7440-31-5 TIN (Sn)**

PEL Long-term value: 2 mg/m<sup>3</sup>  
metal

REL Long-term value: 2 mg/m<sup>3</sup>

TLV Long-term value: 2 mg/m<sup>3</sup>  
metal

**7440-22-4 SILVER (Ag)**

PEL Long-term value: 0.01 mg/m<sup>3</sup>

REL Long-term value: 0.01 mg/m<sup>3</sup>

TLV Long-term value: 0.1 mg/m<sup>3</sup>  
metal: dust and fume

**Additional information:**

PEL = Permissible Exposure Limit (OSHA)

TLV= Threshold Limit Value (ACGIH)

OSHA= Occupational Safety and Health Administration

ACGIH= American Conference of Governmental Industrial Hygienists

**8.2 Exposure controls**

**Personal protective equipment:**

**General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

**Breathing equipment:**

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

Not necessary if room is well-ventilated.

Use suitable respiratory protective device in case of insufficient ventilation.

**Protection of hands:**



Protective gloves

**Material of gloves:**

Nitrile rubber, NBR

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Natural rubber, NR

(Contd. of page 4)

**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



Face Shield with Safety Glasses when refilling.

**9: PHYSICAL AND CHEMICAL PROPERTIES****9.1 Information on basic physical and chemical properties****General Information****Appearance:**

<b>Form:</b>	Pasty
<b>Color:</b>	Silver grey
<b>Odor:</b>	Mild

**pH-value:** Not applicable.**Change in condition****Melting point/Melting range:** Undetermined.**Flash point:** > 93 °C (> 199 °F)**Flammability (solid, gaseous):** Not determined.**Auto igniting:** Product is not selfigniting.**Danger of explosion:** Product does not present an explosion hazard.**Vapor pressure:** Not applicable.**Density:** Not determined.**Vapor density:** Not applicable.**Solubility in / Miscibility with****Water:** Insoluble.**Solvent content:**

<b>Organic solvents:</b>	0.0 %
	0.0 g/l / 0.00 lb/gl

**Solids content:** 96.6 %**10: STABILITY AND REACTIVITY****10.1 Reactivity** No further relevant information available.**10.2 Chemical stability****Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.**10.3 Possibility of hazardous reactions** No dangerous reactions known.**10.4 Conditions to avoid** No further relevant information available.**10.5 Incompatible materials:** Strong acids, strong oxidizers.**10.6 Hazardous decomposition products:**

Carbon monoxide and carbon dioxide

(Contd. on page 6)

US

**Trade name: EM919G SnAgCu**

When heated to soldering temperatures, the solvents are evaporated and rosin may be thermally degraded to liberate aliphatic aldehydes and acids. (Contd. of page 5)

## 11: TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

**Acute toxicity:**

Harmful in contact with skin.

**Primary irritant effect:**

**on the skin:** Possible local irritation by contact with flux or fumes.

**on the eye:** Smoke during soldering can cause eye irritation.

**through inhalation:**

Flux fumes during soldering may cause irritation and damage of mucous membranes and respiratory system.

**Sensitization:**

May cause an allergic skin reaction.

**Additional toxicological information:**

**Carcinogenic categories**

**IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

**NTP (National Toxicology Program)**

None of the ingredients is listed.

**OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

## 12: ECOLOGICAL INFORMATION

### 12.1 Toxicity

**Aquatic 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.

Danger to drinking water if even small quantities leak into the ground.

**12.5 Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

## 13: DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

**Recommendation:**

Disposal must be made according to official regulations.

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

**Uncleaned packagings:**

**Recommendation:** Disposal must be made according to official regulations.

## 14: TRANSPORT INFORMATION

### 14.1 UN-Number

DOT, ADR, IMDG, IATA

Not applicable

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**14.2 UN proper shipping name**  
DOT, ADR, IMDG, IATA

Not applicable

**14.3 Transport hazard class(es)**

**DOT**  
**Class**

Not applicable  
Not regulated.

**ADR, IMDG, IATA**  
**Class**

Not applicable

**14.4 Packing group**

DOT, IMDG, IATA

Not applicable

**Marine pollutant:**

No

**14.6 Special precautions for user**

Not applicable.

**14.7 Transport in bulk according to Annex II of**  
**MARPOL73/78 and the IBC Code**

Not applicable.

**15: REGULATORY INFORMATION****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

**USA** The following information relates to product regulation specific to the USA.

**SARA (Superfund Amendments and Reauthorization Act)****Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

**Section 313 (Specific toxic chemical listings):**

7440-22-4 SILVER (Ag)

Hexyl diglycol

7440-50-8 COPPER (Cu)

**TSCA (Toxic Substances Control Act):** Kester certifies that all components listed below for the subject finished product are on the TSCA Inventory of Chemical Substances and are not subject to any chemical specific regulation under TSCA Section 12(b) export notification requirements delineated at 40 CFR part 707, subpart D.

7440-31-5 TIN (Sn)

7440-22-4 SILVER (Ag)

54553-90-1 Arylmulticarboxylic acid compound with arylimidazoline

9016-45-9 Poly(oxy-1,2-ethanediyl), alpha- (nonylphenyl)- omega- hydroxy-

64742-46-7 Distillates (petroleum), hydrotreated middle

Hexyl diglycol

Propylene glycol compound

670-96-2 2-phenylimidazole

7440-50-8 COPPER (Cu)

8001-78-3 Hydrogenated Castor Oil

26264-05-1 Benzenesulfonic acid, dodecyl-, compound with isopropylamine (1:1)

25265-71-8 oxydipropanol

**California Proposition 65****Chemicals known to cause cancer:**

WARNING: This product contains a chemical(s) known to the State of California to cause cancer.

None of the ingredients is listed.

**Chemicals known to cause reproductive toxicity:**

WARNING: This product contains a chemical(s) known to the State of California to cause birth defects and/or other reproductive harm.

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None of the ingredients is listed.

**Carcinogenic categories**

**EPA (Environmental Protection Agency)**

7440-22-4	SILVER (Ag)	D
7440-50-8	COPPER (Cu)	D

**NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

**CANADA:**

Not classified.

Workplace Hazardous Materials Identification (WHMIS):

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulation (CPR) and the Safety Data Sheet (SDS) contains all of the information required by the CPR.

**Labelling according to Regulation (EC) No 1272/2008**

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

**Hazard pictograms**



GHS07 GHS08

**Signal word** Danger

**Hazard-determining components of labeling:**

Arylmulticarboxylic acid compound with arylimidazoline

Rosin

Distillates (petroleum), hydrotreated middle

**Hazard statements**

Harmful in contact with skin.

May cause an allergic skin reaction.

May cause cancer.

**Precautionary statements**

Avoid breathing dust/fume/gas/mist/vapors/spray

Wear protective gloves / protective clothing.

Contaminated work clothing must not be allowed out of the workplace.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Specific treatment (see on this label).

Call a POISON CENTER/doctor if you feel unwell.

Wash contaminated clothing before reuse.

IF exposed or concerned: Get medical advice/attention.

If skin irritation or rash occurs: Get medical advice/attention.

IF ON SKIN: Wash with plenty of water.

Take off contaminated clothing and wash it before reuse.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

**Information about limitation of use:**

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

**15.2 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

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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 Safety Data Sheet (SDS):** Product Compliance / EHS Department

**Contact:** EHS\_Kester@kester.com

**Date of preparation / last revision** 01/15/2016 / 8

**Abbreviations and acronyms:**

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

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

ICAO: International Civil Aviation Organisation

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

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

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Acute Tox. 3: Acute toxicity, Hazard Category 3

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Carc. 1B: Carcinogenicity, Hazard Category 1B

**\* Data compared to the previous version altered.**