SAFETY DATA SHEET (SDS)
according to 1907/2006/EC, Article 31

Printing Date: 31.10.2017 Version number 3 Revision: 31.10.2017

*
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Trade name: 88 Lead-free Alloy Solder Wire
1.2 Relevant identified uses of the substance or mixture and uses advised against
No further relevant information available.

1.3 Details of the supplier of the safety data sheet
Manufacturer/Supplier:
Kester Inc.
800 West Thorndale Avenue
Itasca, IL 60143
Tel 00+1 + 630 616 4000

ITW Specialty Materials (Suzhou) Co., Ltd.
Hengqiao Road, Wujiang Economic Development Zone
Suzhou, Jiangsu Province, China 215200
Tel +86 512 82060807

Kester GmbH
Ganghofer Strasse 45
D-82216 Gernlinden Germany
Tel +49 (0) 8142 4785 0

Further information obtainable from: 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

*
SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008


GHS07

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 labelled according to the CLP regulation.
Hazard pictograms


GHS07

Signal word Warning

Hazard-determining components of labelling:
Rosin
Hazard statements
H317 May cause an allergic skin reaction.
Precautionary statements
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

(Continued on page 2)

SAFETY DATA SHEET (SDS)
according to 1907/2006/EC, Article 31

Printing Date: 31.10.2017 Version number 3 Revision: 31.10.2017

Trade name: 88 Lead-free Alloy Solder Wire

(Continued from page 1)

2.3 Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

*
SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures -
Description: Mixture of substances listed below with nonhazardous additions.

Chemical components:			
CAS: 7440-22-4 EINECS: 231-131-3	SILVER (Ag)	substance with a Community workplace exposure limit	0-5%
Trade Secret	Rosin	Skin Sens. 1, H317	0-5%

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

SECTION 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.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing agents: CO2, 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 (CO2)
Aliphatic aldehydes
5.3 Advice for firefighters
Protective equipment: No special measures required.
Additional information Flux in cored solder may ignite when the solder melts in a fire.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures Ensure adequate ventilation
6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.
6.3 Methods and material for containment and cleaning up:
Melted solder will solidify on cooling and can be scraped up. Use caution to avoid breathing fumes if a gas torch is used to cut up large pieces.

(Continued on page 3)

SAFETY DATA SHEET (SDS)
according to 1907/2006/EC, Article 31

Printing Date: 31.10.2017 Version number 3 Revision: 31.10.2017

Trade name: 88 Lead-free Alloy Solder Wire

(Continued from page 2)

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.

SECTION 7: Handling and storage

7.1 Precautions for safe handling No special measures required.
Information about fire - and explosion protection: No special measures required.

7.2 Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles: Store in a cool location.
Information about storage in one common storage facility: Not required.
Further information about storage conditions:
Store in dry conditions.
Exposure to sulfur or to high humidity will tarnish the solder surface.
7.3 Specific end use(s) No further relevant information available.

*

SECTION 8: Exposure controls/personal protection

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

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:	
CAS: 7440-22-4 SILVER (Ag)	
WEL	Long-term value: 0.1 mg/m³
Rosin	
WEL	Short-term value: 0.15 mg/m³ Long-term value: 0.05 mg/m³ Sen

8.2 Exposure controls
Personal protective equipment:
General protective and hygienic measures:
The usual precautionary measures are to be adhered to when handling chemicals.
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.
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
Cloth 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.

(Continued on page 4)

SAFETY DATA SHEET (SDS)
according to 1907/2006/EC, Article 31

Printing Date: 31.10.2017 Version number 3 Revision: 31.10.2017

Trade name: 88 Lead-free Alloy Solder Wire

(Continued from page 3)

Eye protection:

Safety Glasses with Side Shields Required

*

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
General Information
Appearance:
Form: Solid
Colour: Silver grey
Odour: Mild

pH-value: Not applicable.

Change in condition
Melting point/freezing point: >100 °C
Undetermined.

Flash point: Not Applicable

Flammability (solid, gas): Not determined.

Auto-ignition temperature: Product is not selfigniting.

Explosive properties: Product does not present an explosion hazard.

Vapour pressure: Not applicable.

Density at 20 °C: 7 g/cm³
Vapour density Not applicable.

Solubility in / Miscibility with water: Insoluble.

Solvent content:
Organic solvents: 0.1 %

Solids content: 99.9 %

SECTION 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

(Continued on page 5)

SAFETY DATA SHEET (SDS)
according to 1907/2006/EC, Article 31

Printing Date: 31.10.2017 Version number 3 Revision: 31.10.2017

Trade name: 88 Lead-free Alloy Solder Wire

(Continued from page 4)

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

*
SECTION 11: Toxicological information

11.1 Information on toxicological effects
Acute toxicity Based on available data, the classification criteria are not met.
Primary irritant effect:
Skin corrosion/irritation Possible local irritation by contact with flux or fumes.
Serious eye damage/irritation Smoke during soldering can cause eye irritation.
Respiratory or skin sensitisation
May cause an allergic skin reaction.
CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
Germ cell mutagenicity Based on available data, the classification criteria are not met.
Carcinogenicity Based on available data, the classification criteria are not met.
Reproductive toxicity Based on available data, the classification criteria are not met.
STOT-single exposure Based on available data, the classification criteria are not met.
STOT-repeated exposure Based on available data, the classification criteria are not met.
Aspiration hazard Based on available data, the classification criteria are not met.

*
SECTION 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 extremely small quantities leak into the ground.
12.5 Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

SECTION 13: Disposal considerations

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

European waste catalogue	
10 08 11	dross and skimmings other than those mentioned in 10 08 10

Uncleaned packaging:
Recommendation: Disposal must be made according to official regulations.

*
SECTION 14: Transport information

14.1 UN-Number
IMDG, IATA Void
14.2 UN proper shipping name Not regulated
ADR, ADN Void

(Continued on page 6)

SAFETY DATA SHEET (SDS)
according to 1907/2006/EC, Article 31

Printing Date: 31.10.2017 Version number 3 Revision: 31.10.2017

Trade name: 88 Lead-free Alloy Solder Wire

(Continued from page 5)

IMDG, IATA	Void Not regulated
14.3 Transport hazard class(es)	
ADR, ADN, IMDG, IATA	
Class	Void
14.4 Packing group	Not regulated
ADR, IMDG, IATA	Void
14.5 Environmental hazards:	
Marine pollutant:	Yes
14.6 Special precautions for user	Not applicable.
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
UN "Model Regulation":	Void

*

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
All ingredients are listed on the following Government Inventories:
China: Inventory of Existing Chemical Substances in China (IECSC)
Korea: Korea Existing Chemicals List (ECL)
Europe: European Inventory of Existing Commercial Chemical Substances (EINECS)
Japan: Inventory of Existing and New Chemical Substances (ENCS)
Philippines: Philippine Inventory of Chemicals and Chemical Substances (PICCS)
USA: TSCA (Toxic Substances Control Act) TSCA Inventory of Chemical Substances

Labelling according to Regulation (EC) No 1272/2008
The product is classified and labelled according to the CLP regulation.
Hazard pictograms

GHS07

Signal word Warning

Hazard-determining components of labelling:
Rosin
Hazard statements
H317 May cause an allergic skin reaction.
Precautionary statements
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 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 responsibilty as to the accuracy, completeness or suitability of this data for any purchaser's use. The data on this Safety Data Sheet (SDS) 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

(Continued on page 7)

SAFETY DATA SHEET (SDS)
according to 1907/2006/EC, Article 31

Printing Date: 31.10.2017 Version number 3 Revision: 31.10.2017

Trade name: 88 Lead-free Alloy Solder Wire

(Continued from page 6)

how to use a Safety Data Sheet (SDS) as a source for hazard information.

Department issuing SDS: Product Compliance / EHS Department
Contact: EHS_Kester@kester.com
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)
IMDG: International Maritime Code for Dangerous Goods
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)
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Skin Sens. 1: Skin sensitisation – Category 1
*** Data compared to the previous version altered.**