

SAFETY DATA SHEET (SDS)

According to 1907/2006/EC, Article 31

Printing Date 04/05/2017

Version number 3

Reviewed on 04/05/2017

1 PRODUCT AND COMPANY IDENTIFICATION**Trade name: 285 Lead (Pb) Alloy Solder Wire****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 USA
Tel (630) 616-4000
Tel International 00 1 630 616-4000

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

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

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. 2 H351 Suspected of causing cancer.

Repr. 1 H360 May damage fertility or the unborn child.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 4 H332 Harmful if inhaled.

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.

(Contd. on page 2)

US

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

Printing Date 04/05/2017

Version number 3

Reviewed on 04/05/2017

Trade name: 285 Lead (Pb) Alloy Solder Wire

(Contd. of page 1)

Hazard pictograms



GHS07 GHS08

Signal word Danger

Hazard-determining components of labeling:

LEAD (Pb)

Rosin

Hazard statements

- H302+H332 Harmful if swallowed or if inhaled.
- H317 May cause an allergic skin reaction.
- H351 Suspected of causing cancer.
- H360 May damage fertility or the unborn child.
- H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

- P260 Do not breathe dust/fume/gas/mist/vapors/spray.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
- P302+P352 IF ON SKIN: Wash with plenty of water.
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard description:

WHMIS Symbols



Classification system:

NFPA ratings (scale 0 - 4)



Health = 2
Fire = 0
Reactivity = 0

HMIS-ratings (scale 0 - 4)



Health = *1
Fire = 0
Reactivity = 0

2.3 Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

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

Printing Date 04/05/2017

Version number 3

Reviewed on 04/05/2017

Trade name: 285 Lead (Pb) Alloy Solder Wire

(Contd. of page 2)

3 COMPOSITION OF MIXTURE

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

CAS No.	Description	% Range
CAS: 7439-92-1 EINECS: 231-100-4	LEAD (Pb) ☠ Carc. 2, H351; Repr. 1B, H360; STOT RE 2, H373 ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332	0-95%
CAS: 7440-31-5 EINECS: 231-141-8	TIN (Sn)	5-90%
Trade Secret	Rosin ⚠ Skin Sens. 1, H317	0.5-6%
CAS: 7440-22-4 EINECS: 231-131-3	SILVER (Ag)	0-5%

4 FIRST AID MEASURES

4.1 Description of first aid measures

General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Follow general first aid procedures.

After inhalation:

In case of unconsciousness place patient stably in side position for transportation.

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

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:

CO2, 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:

5.3 Advice for firefighters

Protective equipment: No special measures required.

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:

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

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.

(Contd. on page 4)

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

Printing Date 04/05/2017

Version number 3

Reviewed on 04/05/2017

Trade name: 285 Lead (Pb) Alloy Solder Wire

(Contd. of page 3)

Protective Action Criteria for Chemicals

PAC-1:

CAS: 7439-92-1	LEAD (Pb)	0.15 mg/m3
CAS: 7440-31-5	TIN (Sn)	6 mg/m3
	Rosin	72 mg/m3
CAS: 7440-22-4	SILVER (Ag)	0.3 mg/m3

PAC-2:

CAS: 7439-92-1	LEAD (Pb)	120 mg/m3
CAS: 7440-31-5	TIN (Sn)	67 mg/m3
	Rosin	790 mg/m3
CAS: 7440-22-4	SILVER (Ag)	170 mg/m3

PAC-3:

CAS: 7439-92-1	LEAD (Pb)	700 mg/m3
CAS: 7440-31-5	TIN (Sn)	400 mg/m3
	Rosin	1,500 mg/m3
CAS: 7440-22-4	SILVER (Ag)	990 mg/m3

7 HANDLING AND STORAGE

- 7.1 Precautions for safe handling** Thorough dedusting.
Information about protection against explosions and fires: 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: Keep receptacle tightly sealed.
- 7.3 Specific end use(s)** 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:

CAS: 7439-92-1 LEAD (Pb)

PEL	Long-term value: 0.05* mg/m ³ *see 29 CFR 1910.1025
REL	Long-term value: 0.05* mg/m ³ *8-hr TWA ;See PocketGuide App.C
TLV	Long-term value: 0.05* mg/m ³ *and inorganic compounds, as Pb; BEI

CAS: 7440-31-5 TIN (Sn)

PEL	Long-term value: 2 mg/m ³ metal
REL	Long-term value: 2 mg/m ³
TLV	Long-term value: 2 mg/m ³ metal

(Contd. on page 5)

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

Printing Date 04/05/2017

Version number 3

Reviewed on 04/05/2017

Trade name: 285 Lead (Pb) Alloy Solder Wire

(Contd. of page 4)

Rosin

TLV | DSEN, RSEN, L

CAS: 7440-22-4 SILVER (Ag)

PEL Long-term value: 0.01 mg/m³

REL Long-term value: 0.01 mg/m³

TLV Long-term value: 0.1 mg/m³
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.

Wash hands before breaks and at the end of work.

Breathing equipment:

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

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

9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

General Information

Appearance:

Form: Solid

Color: Silver grey

Odor: Mild

pH-value: Not applicable.

Change in condition

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: 1740 °C (3164 °F)

(Contd. on page 6)

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

Printing Date 04/05/2017

Version number 3

Reviewed on 04/05/2017

Trade name: 285 Lead (Pb) Alloy Solder Wire

(Contd. of page 5)

Flash point: NA °C
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:
Organic solvents: 0.1 %
Solids content: 99.8 %

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: No further relevant information available.
10.6 Hazardous decomposition products: No dangerous decomposition products known.

11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity:
Harmful if swallowed or if inhaled.

LD/LC50 values that are relevant for classification:

CAS: 7439-92-1 LEAD (Pb)

Oral	LD50	500 mg/kg (ATE)
Inhalative	LC50/4 h	1.5 mg/l (ATE)

Primary irritant effect:

on the skin: Based on available data, the classification criteria are not met.

on the eye: Based on available data, the classification criteria are not met.

Sensitization:

May cause an allergic skin reaction.

Additional toxicological information:

Carcinogenic categories

IARC (International Agency for Research on Cancer)

CAS: 7439-92-1	LEAD (Pb)	2B
----------------	-----------	----

NTP (National Toxicology Program)

CAS: 7439-92-1	LEAD (Pb)	R
----------------	-----------	---

(Contd. on page 7)

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

Printing Date 04/05/2017

Version number 3

Reviewed on 04/05/2017

Trade name: 285 Lead (Pb) Alloy Solder Wire

(Contd. of page 6)

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:

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, ADN, IMDG, IATA Not applicable

14.2 UN proper shipping name

DOT, ADR, ADN, IMDG, IATA Not applicable

14.3 Transport hazard class(es)

DOT, ADR, ADN, IMDG, IATA

Class Not applicable

14.4 Packing group

DOT, IMDG, IATA Not applicable

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.

UN "Model Regulation": Not applicable

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:

(Contd. on page 8)

SAFETY DATA SHEET (SDS)

According to 1907/2006/EC, Article 31

Printing Date 04/05/2017

Version number 3

Reviewed on 04/05/2017

Trade name: 285 Lead (Pb) Alloy Solder Wire

(Contd. of page 7)

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

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):

CAS: 7439-92-1 | LEAD (Pb)

CAS: 7440-22-4 | SILVER (Ag)

Chemicals known to cause cancer:

LEAD (Pb)

Chemicals known to cause reproductive toxicity:

LEAD (Pb)

Carcinogenic categories

EPA (Environmental Protection Agency)

CAS: 7439-92-1 | LEAD (Pb) | B2

CAS: 7440-22-4 | SILVER (Ag) | D

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

None of the ingredients is listed.

CANADA:

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:

LEAD (Pb)

Rosin

Hazard statements

H302+H332 Harmful if swallowed or if inhaled.

H317 May cause an allergic skin reaction.

H351 Suspected of causing cancer.

H360 May damage fertility or the unborn child.

H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

(Contd. on page 9)

SAFETY DATA SHEET (SDS)

According to 1907/2006/EC, Article 31

Printing Date 04/05/2017

Version number 3

Reviewed on 04/05/2017

Trade name: 285 Lead (Pb) Alloy Solder Wire

(Contd. of page 8)

P280 Wear protective gloves/protective clothing/eye protection/face protection.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P302+P352 IF ON SKIN: Wash with plenty of water.
P405 Store locked up.
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.

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

Contact: EHS_Kester@kester.com

Date of preparation / last revision 04/05/2017 / 2

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

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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

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. 4: Acute toxicity – Category 4

Skin Sens. 1: Skin sensitisation – Category 1

Carc. 2: Carcinogenicity – Category 2

Carc. 2: Carcinogenicity – Category 2

Repr. 1: Reproductive toxicity – Category 1

Repr. 1B: Reproductive toxicity – Category 1B

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

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