

**Safety Data Sheet
acc. to OSHA HCS**

Printing date 03/18/2021

Version number 20

Reviewed on 03/18/2021

1 Identification**Trade name: FL250D Solder Paste Lead Alloy****Relevant identified uses of the substance or mixture and uses advised against Professional use****Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

Kester LLC
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Itasca, IL 60143 USA
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Tel International 00 1 630 616-4000

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Tang Xia Yong Village, Songgang Town
Baoan District, Shenzhen 518105
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Information department: EHS_Kester@kester.com**Emergency telephone number:**

CHEMTREC 24-Hour Emergency Response Telephone Number: International +1 703 741-5970

2 Hazard(s) identification**Classification of the substance or mixture**

GHS08 Health hazard

Carc. 1B H350 May cause cancer.

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



GHS07

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

(Contd. on page 2)

-US-

Safety Data Sheet
acc. to OSHA HCS

Printing date 03/18/2021

Version number 20

Reviewed on 03/18/2021

Trade name: FL250D Solder Paste Lead Alloy

(Contd. of page 1)

Label elements

GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms



GHS07 GHS08

Signal word Danger

Hazard-determining components of labeling:

lead
Proprietary Rosin
bis(2-(2-methoxyethoxy)ethyl) ether
Organic solvent

Hazard statements

H317 May cause an allergic skin reaction.
H350 May cause cancer.
H360 May damage fertility or the unborn child.

Precautionary statements

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing dust/fume/gas/mist/vapors/spray
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 If on skin: Wash with plenty of water.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P321 Specific treatment (see on this label).
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P363 Wash contaminated clothing before reuse.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Information pertaining to particular dangers for man and environment:

Contains Rosin. Prolonged exposure to smoke, or fumes generated by heating this product may cause respiratory irritation.

Refer to Section 8 - Exposure Controls / Personal Protection for further information.

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.
vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Mixtures

Description: Mixture

(Contd. on page 3)

**Safety Data Sheet
acc. to OSHA HCS**

Printing date 03/18/2021

Version number 20

Reviewed on 03/18/2021

Trade name: FL250D Solder Paste Lead Alloy

(Contd. of page 2)

Dangerous components:

7440-31-5	tin	30–60%
7439-92-1	lead	30–60%
	Proprietary Rosin	1–5%
7440-22-4	silver	0–3%
143-24-8	bis(2-(2-methoxyethoxy)ethyl) ether	1–3%
	Organic solvent	0.1–3%

SVHC

7439-92-1 | lead

Additional information:

The specific chemical identity of composition and exact percentage is being withheld as a trade secret. The specific chemical identity and exact percentage is made available to health professionals, employees, and designated representatives in accordance with the applicable provisions of paragraph §1910.1200.

For the wording of the listed hazard phrases refer to section 16.

4 First-aid measures

Description of first aid measures

After inhalation:

Supply fresh air and to be sure call for a doctor.

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

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: If symptoms persist consult doctor.

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.

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents:

CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Special hazards arising from the substance or mixture No further relevant information available.

Advice for firefighters

Protective equipment: No special measures required.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures Not required.

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

(Contd. on page 4)

**Safety Data Sheet
acc. to OSHA HCS**

Printing date 03/18/2021

Version number 20

Reviewed on 03/18/2021

Trade name: FL250D Solder Paste Lead Alloy

(Contd. of page 3)

Methods and material for containment and cleaning up:

Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.

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

Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.

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

Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles: No special requirements.

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

Further information about storage conditions: Keep receptacle tightly sealed.

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.

Control parameters

Components with limit values that require monitoring at the workplace:

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.

At this time, the other constituents have no known exposure limits.

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

7439-92-1 lead

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

(Contd. on page 5)

Safety Data Sheet
acc. to OSHA HCS

Printing date 03/18/2021

Version number 20

Reviewed on 03/18/2021

Trade name: FL250D Solder Paste Lead Alloy

(Contd. of page 4)

Proprietary Rosin	
TLV (USA)	Long-term value: 0.001* mg/m ³ *inhalable fraction, DSEN, RSEN
7440-22-4 silver	
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: dust and fume
Ingredients with biological limit values:	
7439-92-1 lead	
BEI (USA)	30 µg/100 ml Medium: blood Time: not critical Parameter: Lead
	10 µg/100 ml Medium: blood Time: not critical Parameter: Lead (women of child bearing potential)

Additional information: The lists that were valid during the creation were used as basis.

Exposure controls Use only with adequate ventilation.

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:

Use suitable respiratory protective device in case of insufficient ventilation.

Use suitable respiratory protective device when high concentrations are present.

Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

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.

(Contd. on page 6)

Safety Data Sheet
acc. to OSHA HCS

Printing date 03/18/2021

Version number 20

Reviewed on 03/18/2021

Trade name: FL250D Solder Paste Lead Alloy

(Contd. of page 5)

Eye protection:



Safety glasses

Body protection: Protective work clothing

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:

Form:	Pasty
Color:	Silver grey
Odor:	Characteristic

pH-value: Not applicable.

Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	274 °C (525.2 °F)

Flash point: >93 °C (>199.4 °F)

Flammability (solid, gaseous): Not determined.

Decomposition temperature: Not determined.

Auto igniting: Product is not selfigniting.

Danger of explosion: Product does not present an explosion hazard.

Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

Vapor pressure at 970 °C (1,778 °F): 1.3 hPa (1 mm Hg)

Density: Not determined.

Relative density: Not determined.

Vapor density: Not applicable.

Evaporation rate: Not applicable.

Solubility in / Miscibility with

Water: Insoluble.

Partition coefficient (n-octanol/water): Not determined.

Viscosity:

Dynamic:	Not applicable.
Kinematic:	Not applicable.

(Contd. on page 7)

**Safety Data Sheet
acc. to OSHA HCS**

Printing date 03/18/2021

Version number 20

Reviewed on 03/18/2021

Trade name: FL250D Solder Paste Lead Alloy

(Contd. of page 6)

Solvent content:	
VOC content:	1.25–1.51 % 15.1 g/l / 0.13 lb/gal
Solids content:	89.2–91.4 %
Other information	No further relevant information available.

10 Stability and reactivity

Reactivity No further relevant information available.

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: No further relevant information available.

Hazardous decomposition products: Irritant gases/vapors

11 Toxicological information

Information on toxicological effects

Acute toxicity:

LD/LC50 values that are relevant for classification:

ATE (Acute Toxicity Estimate)

Oral	LD50	28,161–34,089 mg/kg
Inhalative	LC50/4 h	791–957 mg/l

143-24-8 bis(2-(2-methoxyethoxy)ethyl) ether

Oral	LD50	5,140 mg/kg (rat)
Inhalative	LC50/4 h	11 mg/l (ATE)

Primary irritant effect:

on the skin: No irritant effect.

on the eye: No irritating effect.

Sensitization: Sensitization possible through skin contact.

Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

Carcinogenic categories

IARC (International Agency for Research on Cancer)

7439-92-1	lead	2B
111-42-2	2,2'-iminodiethanol	2B

(Contd. on page 8)

**Safety Data Sheet
acc. to OSHA HCS**

Printing date 03/18/2021

Version number 20

Reviewed on 03/18/2021

Trade name: FL250D Solder Paste Lead Alloy

(Contd. of page 7)

NTP (National Toxicology Program)

7439-92-1 | lead

R

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

Toxicity

Aquatic toxicity: No further relevant information available.

Persistence and degradability No further relevant information available.

Behavior in environmental systems:

Bioaccumulative potential No further relevant information available.

Mobility in soil No further relevant information available.

Additional ecological information:

General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

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.

vPvB: Not applicable.

Other adverse effects No further relevant information 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.

Recommendation: Disposal must be made according to official regulations.

14 Transport information

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

(Contd. on page 9)

**Safety Data Sheet
acc. to OSHA HCS**

Printing date 03/18/2021

Version number 20

Reviewed on 03/18/2021

Trade name: FL250D Solder Paste Lead Alloy

(Contd. of page 8)

Environmental hazards:	Not applicable.
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

15 Regulatory information

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

Section 355 (extremely hazardous substances):

None of the ingredients is listed.

Section 313 (Specific toxic chemical listings):

7439-92-1	lead
7440-22-4	silver
7440-36-0	antimony
872-50-4	N-methyl-2-pyrrolidone
111-42-2	2,2'-iminodiethanol

TSCA (Toxic Substances Control Act): (Substances not listed)

All ingredients are listed.

Hazardous Air Pollutants

7439-92-1	lead
111-42-2	2,2'-iminodiethanol

Proposition 65

Chemicals known to cause cancer:

7439-92-1	lead
111-42-2	2,2'-iminodiethanol

Chemicals known to cause reproductive toxicity for females:

7439-92-1	lead
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Chemicals known to cause reproductive toxicity for males:

7439-92-1	lead
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Chemicals known to cause developmental toxicity:

7439-92-1	lead
872-50-4	N-methyl-2-pyrrolidone

Carcinogenic categories

EPA (Environmental Protection Agency)

7439-92-1	lead	B2
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(Contd. on page 10)

**Safety Data Sheet
acc. to OSHA HCS**

Printing date 03/18/2021

Version number 20

Reviewed on 03/18/2021

Trade name: FL250D Solder Paste Lead Alloy

(Contd. of page 9)

7440-22-4	silver	D
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TLV (Threshold Limit Value established by ACGIH)

7439-92-1	lead	A3
111-42-2	2,2'-iminodiethanol	A3

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

None of the ingredients is listed.

National regulations:

The product is subject to be labeled according with the prevailing version of the regulations on hazardous substances.

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.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

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 the purchaser's use. The data on this Safety Data Sheet 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 employees must be trained on how to use the SDS as a source for hazard information.

Department issuing SDS: Product Compliance / EHS Department

Contact: EHS_Kester@Kester.com

Date of preparation / last revision 03/18/2021 / 1

Abbreviations and acronyms:

ADR: Accord relatif au transport international 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

ACGIH: American Conference of Governmental Industrial Hygienists

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)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

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

BEI: Biological Exposure Limit

Skin Sens. 1: Skin sensitisation – Category 1

(Contd. on page 11)

Safety Data Sheet
acc. to OSHA HCS

Printing date 03/18/2021

Version number 20

Reviewed on 03/18/2021

Trade name: FL250D Solder Paste Lead AlloyCarc. 1B: Carcinogenicity – Category 1B
Repr. 1A: Reproductive toxicity – Category 1A

(Contd. of page 10)

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