Printing date 22.01.2009

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1 Identification of substance:

- · Product details:
- · Trade name: Bars, E-Bar; Ultrapure Sn6040, Sn63Pb37, SnPb2Ag
- · Application of the substance / the preparation soldering alloy

• Manufacturer/Supplier: Kester 800 W. Thorndale Ave. Itasca, IL 60143

Tel.(847) 297-160 *Fax.*(847) 390-9338

· Informing department: Product safety department.

· Emergency information:

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

CHEMTREC 24-Hour Emergency Telephone Number: (Outside of the US. and Canada): (703)527-3887

2 Hazards identification

· Hazard designation:



Xn Harmful N Dangerous for the environment

· Information pertaining to particular dangers for man and environment

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

R 20/22 Harmful by inhalation and if swallowed.

- R 33 Danger of cumulative effects.
- *R* 62 *Possible risk of impaired fertility.*

R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· Classification system

The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies. • GHS label elements



3.7/2 - Suspected of damaging fertility or the unborn child.

Warning

4.1/1 - Very toxic to aquatic life with long lasting effects.

Warning

3.1/4 - Harmful if swallowed.

- 3.1/4 Harmful if inhaled.
- · Prevention:

Obtain special instructions before use.

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

Avoid breathing dust/fume/gas/mist/vapours/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Avoid release to the environment.

Use personal protective equipment as required.

· Response:

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

IF exposed or concerned: Get medical advice/attention.

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Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. Collect spillage. • **Storage:** Store locked up.

· Disposal:

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

3 Composition/information on ingredients

- · Chemical characterization
- · Description: Mixture of the substances listed below with harmless additions.
- · Dangerous components:

Dangerous components				
		🗙 Xn; R 20/22	50-100%	
EINECS: 231-141-8		Danger: 🛞 3.1.0/3, 3.1.I/4		
		🗙 Xn, 🏪 N; R 20/22-33-62-50/53	25-50%	
EINECS: 231-100-4		Danger: 🛞 3.1.0/3, 3.1.1/4		
		Warning: 🚸 3.7/2; 🕸 4.1.C/1		
• Additional information For the wording of the listed risk phrases refer to section 16.				

4 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.

• After inhalation

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

In case of unconsciousness bring patient into stable side position for transport.

- After skin contact The product is not skin irritating.
- · After eye contact Rinse opened eye for several minutes under running water.
- After swallowing Instantly call for doctor.

5 Fire fighting measures

- · Suitable extinguishing agents
- CO2, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
- · Protective equipment: Put on breathing apparatus.

6 Accidental release measures

· Person-related safety precautions: Not required.

• *Measures for environmental protection:* Inform respective authorities in case product reaches water or sewage system. Do not allow to enter drainage system, surface or ground water.

• *Measures for cleaning/collecting:* Dispose of contaminated material as waste according to item 13. Ensure adequate ventilation.

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7 Handling and storage

· Handling

- · Information for safe handling:
- Thorough dedusting.
- Ensure good ventilation/exhaustion at the workplace.
- Information about protection against explosions and fires: No special measures required.
- · Storage
- **Requirements to be met by storerooms and containers:** No special requirements.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep container tightly sealed.

8 Exposure controls and personal protection

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

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

7440-22-4 silver (0-2.5%)

WEL Long-term value: 0.1 mg/m³

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

- · Personal protective equipment
- · General protective and hygienic measures Keep away from foodstuffs, beverages and food.
- Wash hands during breaks and at the end of the work.
- · Breathing equipment:

In case of brief exposure or low pollution use breathing filter apparatus. In case of intensive or longer exposure use breathing apparatus that is independent of circulating air.

· Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

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 trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection: Not required.

General Information	ı	
Form:	Solid.	
Colour:	Silver-coloured	
Odour:	Characteristic	
Change in condition		
Melting point/Mela	ing range: Not determined	
	ng range: > $999^{\circ}C$	

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· Flash point:	Not applicable	
\cdot Self-inflammability:	Product is not selfigniting.	
• Danger of explosion:	Product is not explosive.	
· Density at 20°C	6.64 g/cm ³	
• Solubility in / Miscibility with Water:	Unsoluble	
· Solvent content: Organic solvents:	0.0 %	
· Solids content:	100.0 %	

10 Stability and reactivity

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

· Dangerous reactions No dangerous reactions known

· Dangerous products of decomposition: No dangerous decomposition products known

11 Toxicological information

- · Acute toxicity:
- · Primary irritant effect:
- on the skin: No irritant effect.
- on the eye: No irritant effect.
- Sensitization: No sensitizing effect known.
- \cdot Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version: Harmful

12 Ecological information:

- · Ecotoxical effects:
- *Remark:* Very toxic for fish
- · Other information: None
- · General notes:
- Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water. Do not allow product to reach ground water, water bodies or sewage system. Danger to drinking water if even small quantities leak into soil. Also poisonous for fish and plankton in water bodies. Very toxic for aquatic organisms

13 Disposal considerations

- · Product:
- · Recommendation

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

· European waste catalogue

10 08 11 Krätzen und Abschaum mit Ausnahme derjenigen, die unter 10 08 10 fallen

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Trade name: Bars, E-Bar; Ultrapure Sn6040, Sn63Pb37, SnPb2Ag

· Uncleaned packagings:

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

14 Transport information

- · Land transport ADR/RID (cross-border)
- · ADR/RID-GGVS/E Class: -
- Maritime transport IMDG:
- · IMDG Class:
- Marine pollutant: No

· Air transport ICAO-TI and IATA-DGR:

- · ICAO/IATA Class:
- · UN "Model Regulation": -
- · Environmental hazards: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID

15 Regulatory information

• Designation according to EC guidelines:

Observe the normal safety regulations when handling chemicals The product has been classified and labelled in accordance with EC Directives / Ordinance on Hazardous Materials (GefStoffV)

· Code letter and hazard designation of product:



Xn Harmful N Dangerous for the environment

- · Hazard-determining components of labelling:
- lead tin
- · Risk phrases:
- 20/22 Harmful by inhalation and if swallowed.
- *33* Danger of cumulative effects.
- 62 Possible risk of impaired fertility.

50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· Safety phrases:

- 9 *Keep container in a well-ventilated place.*
- 29 Do not empty into drains.
- 36/37 Wear suitable protective clothing and gloves.
- 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
- 57 Use appropriate container to avoid environmental contamination.
- 60 This material and its container must be disposed of as hazardous waste.
- · National regulations
- Technical instructions (air):

Class	Share in %	
III	50-100	

• Water hazard class: Water hazard class 2 (Self-assessment): hazardous for water.

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16 Other information:

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant R-phrases

20/22 Harmful by inhalation and if swallowed.

33 Danger of cumulative effects.

50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
62 Possible risk of impaired fertility.

- · Department issuing data specification sheet: Environment protection department.
- · Contact: Bich Le (Mrs.)

• 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: Reglement internationale concernent le transport des merchandises 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