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

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

Trade name: EP256HA Solder Paste
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

GHS08 health hazard

Carc. 2   H351  Suspected of causing cancer.
Repr. 1B  H360  May damage fertility or the unborn child.
STOT RE 2 H373  May cause damage to organs through prolonged or repeated exposure.

GHS05 corrosion

Eye Dam. 1 H318  Causes serious eye damage.

GHS07

Acute Tox. 4  H302  Harmful if swallowed.
Acute Tox. 4  H332  Harmful if inhaled.

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

(Continued on page 2)
Hazard pictograms

GHS05 GHS07 GHS08

Signal word Danger

Hazard-determining components of labelling:
LEAD (Pb)
Hexyl diglycol

Hazard statements
H302+H332 Harmful if swallowed or if inhaled.
H318 Causes serious eye damage.
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/vapours/spray.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/ regional/national/international regulations.

Additional information:
Contains lead. Should not be used on surfaces liable to be chewed or sucked by children.
Contains Aromatic monocarboxylic acid. May produce an allergic reaction.
Restricted to professional users.

2.3 Other hazards

Results of PBT and vPvB assessment

PBT:
CAS: 3194-55-6 1,2,5,6,9,10- hexabromocyclododecane

vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

Description: Mixture of substances listed below with nonhazardous additions.

<table>
<thead>
<tr>
<th>Chemical components:</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS: 7439-92-1</td>
<td>LEAD (Pb)</td>
<td></td>
</tr>
<tr>
<td>EINECS: 231-100-4</td>
<td></td>
<td>Carc. 2; H351; Repir. 1B, H330; STOT RE 2; H373</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute Tox. 4, H302; Acute Tox. 4, H332</td>
</tr>
<tr>
<td>CAS: 112-59-4</td>
<td>Hexyl diglycol</td>
<td></td>
</tr>
<tr>
<td>EINECS: 203-988-3</td>
<td></td>
<td>Eye Dam. 1, H318</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute Tox. 4, H302; Acute Tox. 4, H312</td>
</tr>
<tr>
<td>CAS: 7440-22-4</td>
<td>SILVER (Ag)</td>
<td></td>
</tr>
<tr>
<td>EINECS: 231-131-3</td>
<td></td>
<td>substance with a Community workplace exposure limit</td>
</tr>
</tbody>
</table>
Trade name: EP256HA Solder Paste

(Continued from page 2)

<table>
<thead>
<tr>
<th>Trade Secret</th>
<th>Aromatic monocarboxylic acid</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS: 3194-55-6</td>
<td>1,2,5,6,9,10-hexabromocyclododecane</td>
</tr>
<tr>
<td>EINECS: 221-695-9</td>
<td>PBT</td>
</tr>
<tr>
<td>SVHC</td>
<td></td>
</tr>
<tr>
<td>CAS: 3194-55-6</td>
<td>1,2,5,6,9,10-hexabromocyclododecane</td>
</tr>
</tbody>
</table>

**SECTION 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:** 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:

5.3 **Advice for firefighters**

**Protective equipment:** No special measures required.

**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:**

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.

**SECTION 7: Handling and storage**

7.1 **Precautions for safe handling** Thorough dedusting.

**Information about fire - and explosion protection:** No special measures required.

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Trade name: EP256HA Solder Paste

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 container tightly sealed.
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

8.2 Exposure controls
Personal protective equipment:
General protective and hygienic measures:
The usual precautionary measures are to be adhered to when handling chemicals.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Respiratory protection:
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 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

(Continued on page 5)
### 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: No further relevant information available.
10.6 Hazardous decomposition products: No dangerous decomposition products known.

### SECTION 11: Toxicological information

11.1 Information on toxicological effects
Acute toxicity
Harmful if swallowed or if inhaled.

<table>
<thead>
<tr>
<th>CAS: 7439-92-1 LEAD (Pb)</th>
</tr>
</thead>
</table>

LD/LC50 values relevant for classification:

<table>
<thead>
<tr>
<th>Oral</th>
<th>LD50 500 mg/kg (ATE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalative</td>
<td>LC50/4 h 1.5 mg/l (ATE)</td>
</tr>
</tbody>
</table>

Primary irritant effect:
Skin corrosion/irritation Based on available data, the classification criteria are not met.
Serious eye damage/irritation
Causes serious eye damage.
Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
Germ cell mutagenicity Based on available data, the classification criteria are not met.
Carcinogenicity
Suspected of causing cancer.

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SAFETY DATA SHEET (SDS)  
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Trade name: EP256HA Solder Paste

Reproductive toxicity
May damage fertility or the unborn child.

STOT-single exposure  Based on available data, the classification criteria are not met.

STOT-repeated exposure  May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard  Based on available data, the classification criteria are not met.

(Continued from page 5)

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 small quantities leak into the ground.

12.5 Results of PBT and vPvB assessment

PBT:

CAS: 3194-55-6 1,2,5,6,9,10- hexabromocyclododecane

vPvB: Not applicable.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Recommendation  Must not be disposed together with household garbage. Do not allow product to reach sewage system.

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
ADR, ADN, IMDG, IATA  Void

14.3 Transport hazard class(es)
ADR, ADN, IMDG, IATA

Class  Void

14.4 Packing group
ADR, IMDG, IATA  Void

14.5 Environmental hazards:  Not applicable.

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)

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SAFETY DATA SHEET (SDS)
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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

GHS05  GHS07  GHS08

Signal word Danger

Hazard-determining components of labelling:
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Hazard statements
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P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
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P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Directive 2012/18/EU
Named dangerous substances - ANNEX I None of the ingredients is listed.

LIST OF SUBSTANCES SUBJECT TO AUTHORIZATION (ANNEX XIV)
CAS: 3194-55-6 1,2,5,6,9,10- hexabromocyclododecane

REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 63

National regulations:

Other regulations, limitations and prohibitive regulations

Substances of very high concern (SVHC) according to REACH, Article 57
CAS: 3194-55-6 1,2,5,6,9,10- hexabromocyclododecane

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 responsibility 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 (Continued on page 8)
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 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)
- 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
- Acute Tox. 4: Acute toxicity – Category 4
- Eye Dam. 1: Serious eye damage/eye irritation – Category 1
- Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
- Skin Sens. 1B: Skin sensitisation – Category 1B
- Carc. 2: Carcinogenicity – Category 2
- Carc. 2: Carcinogenicity – Category 2
- Repr. 1B: Reproductive toxicity – Category 1B
- Repr. 2: Reproductive toxicity – Category 2
- STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

* Data compared to the previous version altered.