PRODUCT AND COMPANY IDENTIFICATION

Trade name: WP601-ZH Water Soluble Paste

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 Gerolzhofen 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

HAZARDS IDENTIFICATION

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

⚠️ GHS07

Skin Irrit. 2  H315 Causes skin irritation.
Eye Irrit. 2A H319 Causes serious eye irritation.

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

⚠️ GHS07

Signal word Warning
Hazard statements
H315 Causes skin irritation.
H319 Causes serious eye irritation.
Precautionary statements
P280 Wear protective gloves.
P280 Wear eye protection / face protection.
P264 Wash thoroughly after handling.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Trade name: WP601-ZH Water Soluble Paste

P321 Specific treatment (see on this label).
P332+P313 If skin irritation occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P302+P352 IF ON SKIN: Wash with plenty of water.
P362+P364 Take off contaminated clothing and wash it before reuse.

Hazard description:
WHMIS Symbols
D2B - Toxic; material causing other toxic effects

Classification system:
NFPA ratings (scale 0 - 4)

Health = 1
Fire = 1
Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = 1
Fire = 1
Reactivity = 0

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

COMPOSITION OF MIXTURE

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

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Description</th>
<th>% Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS: 7440-31-5</td>
<td>TIN (Sn)</td>
<td>85-100%</td>
</tr>
<tr>
<td>EINECS: 231-141-8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS: 7440-22-4</td>
<td>SILVER (Ag)</td>
<td>1.0-3.0%</td>
</tr>
<tr>
<td>EINECS: 231-131-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proprietary</td>
<td></td>
<td>1.0-3.0%</td>
</tr>
</tbody>
</table>

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.

(Contd. of page 1, page 2, page 3)
Trade name: WP601-ZH Water Soluble Paste

(Contd. of page 2)

**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.

(Contd. of page 2)

**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 of the collected material according to regulations.
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. of page 2)

**HANDLING AND STORAGE**

7.1 Precautions for safe handling No special measures required.
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: None.

7.3 Specific end use(s) No further relevant information available.

(Contd. of page 2)

**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:
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
At this time, the remaining constituent has no known exposure limits.

<table>
<thead>
<tr>
<th>7440-31-5 TIN (Sn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEL Long-term value: 2 mg/m³</td>
</tr>
<tr>
<td>REL Long-term value: 2 mg/m³</td>
</tr>
<tr>
<td>TLV Long-term value: 2 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7440-22-4 SILVER (Ag)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEL Long-term value: 0.01 mg/m³</td>
</tr>
<tr>
<td>REL Long-term value: 0.01 mg/m³</td>
</tr>
</tbody>
</table>

(Contd. on page 4)
Trade name: WP601-ZH Water Soluble Paste

- 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.
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
  - Face Shield with Safety Glasses when refilling.

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**PHYSICAL AND CHEMICAL PROPERTIES**

**9.1 Information on basic physical and chemical properties**

**General Information**

**Appearance:**
- **Form:** Pasty
- **Color:** Silver-colored
- **Odor:** Characteristic

**pH-value:** Not determined.

**Change in condition**
- **Melting point/Melting range:** Undetermined.
- **Boiling point/Boiling range:** 272 °C (522 °F)

**Flash point:** 140 °C (284 °F)

**Auto igniting:**
- Product is not selfigniting.

**Danger of explosion:**
- Product does not present an explosion hazard.
Trade name: WP601-ZH Water Soluble Paste

Density: Not determined.
Solubility in / Miscibility with
Water: Not miscible or difficult to mix.
Solvent content:
- Organic solvents: 0.0 %
- Solids content: 91.7 %

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.

TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:
Acute toxicity: Based on available data, the classification criteria are not met.
Primary irritant effect:
- on the skin: Causes skin irritation.
- on the eye: Causes serious eye irritation.
Sensitization: Based on available data, the classification criteria are not met.
Additional toxicological information:

Carcinogenic categories:
- IARC (International Agency for Research on Cancer)
  - Polyvinylpyrrolidone
  - 102-71-6 2,2',2''-trinitroethanol
- NTP (National Toxicology Program)
  - None of the ingredients is listed.
- OSHA-Ca (Occupational Safety & Health Administration)
  - None of the ingredients is listed.

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.
12.5 Results of PBT and vPvB assessment
PBT: Not applicable.

(Contd. of page 6)
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.

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

REGULATORY INFORMATION

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

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):

<table>
<thead>
<tr>
<th>Number</th>
<th>Chemical</th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-22-4</td>
<td>SILVER (Ag)</td>
</tr>
<tr>
<td>7440-50-8</td>
<td>COPPER (Cu)</td>
</tr>
</tbody>
</table>

Chemicals known to cause cancer:

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity:

None of the ingredients is listed.

Carcinogenic categories

EPA (Environmental Protection Agency)

<table>
<thead>
<tr>
<th>Number</th>
<th>Chemical</th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-22-4</td>
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</tr>
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<td>COPPER (Cu)</td>
</tr>
</tbody>
</table>

(Contd. of page 5)
Trade name: WP601-ZH Water Soluble Paste

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

Signal word Warning

Hazard statements
H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary statements
P280 Wear protective gloves.
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P302+P352 IF ON SKIN: Wash with plenty of water.
P362+P364 Take off contaminated clothing and wash it before reuse.

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

OTHER INFORMATION

Department issuing Safety Data Sheet (SDS): Product Compliance / EHS Department
Contact: EHS_Kester@kester.com
Date of preparation / last revision 09/09/2016 / -

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)
WHMIS: Hazardous Materials Identification System (USA)
GHS: Workplace Hazardous Materials Information System (Canada)
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
Met. Corr.1: Corrosive to metals – Category 1
<table>
<thead>
<tr>
<th>Trade name: WP601-ZH Water Soluble Paste</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Corr. 1C: Skin corrosion/irritation – Category 1C</td>
</tr>
<tr>
<td>Skin Irrit. 2: Skin corrosion/irritation – Category 2</td>
</tr>
<tr>
<td>Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A</td>
</tr>
<tr>
<td>STOT SE 3: Specific target organ toxicity (single exposure) – Category 3</td>
</tr>
</tbody>
</table>

* Data compared to the previous version altered.