1 Identification

· Product identifier
  · Trade name: HAND-I-SAN
· Article number: LS9A

Details of the supplier of the safety data sheet
· Manufacturer/Supplier:
  ZEE COMPANY, INC.
  4146 South Creek Road
  Chattanooga, TN  37406
· Information department: Technical Services: 423-698-1401
· Emergency telephone number: CHEMTREC:  800-424-9300

2 Hazard(s) identification

· Classification of the substance or mixture
  
  GHS02 Flame
  Flam. Liq. 2  H225  Highly flammable liquid and vapor.

  GHS07
  Eye Irrit. 2A  H319  Causes serious eye irritation.
  STOT SE 3  H336  May cause drowsiness or dizziness.

  Classification according to Directive 67/548/EEC or Directive 1999/45/EC
  Irritant
  Irritating to eyes.

  Highly flammable
  Highly flammable.
  Vapours may cause drowsiness and dizziness.

· Information concerning particular hazards for human and environment:
  The product has to be labeled due to the calculation procedure of international guidelines.

· Classification system:
  The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

· Label elements

· Labelling according to EU guidelines:
  The product has been classified and marked in accordance with directives on hazardous materials.

(Contd. on page 2)
Trade name: HAND-I-SAN

· **Code letter and hazard designation of product:**

  ![Irritant](image1)

  ![Highly flammable](image2)

· **Risk phrases:**

  Highly flammable.
  Irritating to eyes.
  Vapours may cause drowsiness and dizziness.

· **Safety phrases:**

  Keep container tightly closed and in a well-ventilated place.
  Keep away from sources of ignition - No smoking.
  Do not breathe vapour/spray.
  This material and its container must be disposed of as hazardous waste.

· **Classification system:**

  · **NFPA ratings (scale 0 - 4)**

    ![Health](image3)
    ![Fire](image4)
    ![Reactivity](image5)

    Health = 0
    Fire = 2
    Reactivity = 0

  · **HMIS-ratings (scale 0 - 4)**

    ![Health](image6)
    ![Fire](image7)
    ![Reactivity](image8)

    Health = 0
    Fire = 2
    Reactivity = 0

· **Other hazards**

  · **Results of PBT and vPvB assessment**

    · **PBT:** Not applicable.
    · **vPvB:** Not applicable.

### 3 Composition/information on ingredients

· **Chemical characterization:** Mixtures

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

· **Dangerous components:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Substance</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-63-0</td>
<td>propan-2-ol</td>
<td>75-85%</td>
</tr>
<tr>
<td>56-81-5</td>
<td>glycerol</td>
<td>≤ 2.5%</td>
</tr>
</tbody>
</table>

### 4 First-aid measures

· **Description of first aid measures**

  · **After inhalation:** Remove to fresh air. If symptoms persist consult a doctor.
  · **After skin contact:** Generally the product does not irritate the skin.
  · **After eye contact:** Rinse opened eye for a minimum of 15 minutes with running water. If symptoms persist, consult a doctor.
  · **After swallowing:** Immediately contact a doctor or Poison Control Center.
Trade name: HAND-I-SAN

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
  Keep containers cool by spraying with water if exposed to fire.
· Advice for firefighters
· Protective equipment: No special measures required.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures
  Wear protective equipment. Keep unprotected persons away.
· Environmental precautions:
  Dilute with plenty of water.
  Do not allow to penetrate the ground/soil.
  Do not allow to enter surface or ground water.
· Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  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

· Precautions for safe handling
  Ensure good ventilation/exhaustion at the workplace.
  Prevent formation of aerosols.
· Information about protection against explosions and fires:
  Keep ignition sources away - Do not smoke.
  Protect against electrostatic charges.
· Conditions for safe storage, including any incompatibilities
· Storage:
  Requirements to be met by storerooms and receptacles:
  Store in a cool location.
  Keep this and all chemicals out of the reach of children.
· Information about storage in one common storage facility: Not required.
· Further information about storage conditions:
  Keep receptacle tightly sealed.
  Store in cool, dry conditions in well sealed receptacles.
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:

| Substance          | PEL Long-term value | REL Short-term value | TLV Short-term value | BEI
|--------------------|---------------------|----------------------|----------------------|------
| 67-63-0 propan-2-ol| 980 mg/m³, 400 ppm  | 1225 mg/m³, 500 ppm  | 984 mg/m³, 400 ppm   |      
|                    |                     | 492 mg/m³, 200 ppm   |                      |      

<table>
<thead>
<tr>
<th>Substance</th>
<th>PEL Long-term value</th>
<th>REL Short-term value</th>
<th>TLV Short-term value</th>
</tr>
</thead>
<tbody>
<tr>
<td>56-81-5 glycerol</td>
<td>15* 5** mg/m³</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Additional information: The lists that were valid during the creation were used as basis.
- Exposure controls
- Personal protective equipment:
  - General protective and hygienic measures:
    - Keep away from foodstuffs, beverages and feed.
    - Immediately remove all soiled and contaminated clothing.
    - Wash hands before breaks and at the end of work.
    - Avoid contact with the eyes.
    - Avoid contact with the eyes and skin.
- Breathing equipment: Not necessary if room is well-ventilated.
- Protection of hands: Not required.
- Eye protection: Safety glasses

9 Physical and chemical properties

- Information on basic physical and chemical properties
  - General Information
    - Appearance:
      - Form: Liquid
      - Color: Colorless
      - Odor: Characteristic
      - Odor threshold: Not determined.
### 10 Stability and reactivity

**Reactivity**
- **Chemical stability**: Stable
- **Thermal decomposition / conditions to be avoided**: No decomposition if used according to specifications.
- **Possibility of hazardous reactions**: No dangerous reactions known.
- **Conditions to avoid**: Extreme heat or open flames.
- **Incompatible materials**: No further relevant information available.
- **Hazardous decomposition products**: Oxides of carbon
11 Toxicological information

- Information on toxicological effects
  - Acute toxicity:
    - LD/LC50 values that are relevant for classification:
      | 67-63-0 propan-2-ol |
      | Oral | LD50 | 5045 mg/kg (rat) |
      | Dermal | LD50 | 12800 mg/kg (rabbit) |
      | Inhalative | LC50/4 h | 30 mg/l (rat) |
  - Primary irritant effect:
    - on the skin: No irritant effect.
    - on the eye: Irritating effect.
  - Sensitization: No sensitizing effects known.
- 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)
    - 67-63-0 propan-2-ol 3
  - NTP (National Toxicology Program)
    - None of the ingredients is listed.
  - 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.
  - 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: Dispose of in accordance with federal, state, and local regulations.
## 14 Transport information

<table>
<thead>
<tr>
<th>UN-Number</th>
<th>UN1993</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>Flammable liquids, n.o.s., solution</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>DOT</td>
</tr>
<tr>
<td>Class</td>
<td>3 Flammable liquids</td>
</tr>
<tr>
<td>Label</td>
<td>3</td>
</tr>
<tr>
<td>Class</td>
<td>3 Flammable liquids</td>
</tr>
<tr>
<td>Label</td>
<td>3</td>
</tr>
<tr>
<td>IMDG, IATA</td>
<td></td>
</tr>
<tr>
<td>Class</td>
<td>3 Flammable liquids</td>
</tr>
<tr>
<td>Label</td>
<td>3</td>
</tr>
<tr>
<td>Packing group</td>
<td>II</td>
</tr>
<tr>
<td>Environmental hazards:</td>
<td>No</td>
</tr>
<tr>
<td>Marine pollutant:</td>
<td>No</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>Warning: Flammable liquids</td>
</tr>
<tr>
<td>Danger code (Kemler):</td>
<td>33</td>
</tr>
<tr>
<td>EMS Number:</td>
<td>F-E,S-D</td>
</tr>
<tr>
<td>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Transport/Additional information:</td>
<td></td>
</tr>
<tr>
<td>DOT</td>
<td></td>
</tr>
<tr>
<td>Quantity limitations</td>
<td>On passenger aircraft/rail: 5 L</td>
</tr>
<tr>
<td>On cargo aircraft only: 60 L</td>
<td></td>
</tr>
<tr>
<td>IMDG</td>
<td></td>
</tr>
<tr>
<td>Limited quantities (LQ)</td>
<td>1L</td>
</tr>
</tbody>
</table>
Trade name: HAND-I-SAN

- **Excepted quantities (EQ)**
  - Code: E2
  - Maximum net quantity per inner packaging: 30 ml
  - Maximum net quantity per outer packaging: 500 ml

- **UN "Model Regulation”:**
  - UN1993, Flammable liquids, n.o.s., solution, 3, II

---

**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):**
      - 67-63-0 propan-2-ol
  - **TSCA (Toxic Substances Control Act):**
    - All ingredients are listed.
  - **Proposition 65**
    - **Chemicals known to cause cancer:**
      - None of the ingredients is listed.
    - **Chemicals known to cause reproductive toxicity for females:**
      - None of the ingredients is listed.
    - **Chemicals known to cause reproductive toxicity for males:**
      - None of the ingredients is listed.
    - **Chemicals known to cause developmental toxicity:**
      - None of the ingredients is listed.

- **Carcinogenic categories**
  - **EPA (Environmental Protection Agency)**
    - None of the ingredients is listed.
  - **TLV (Threshold Limit Value established by ACGIH)**
    - 67-63-0 propan-2-ol A4
  - **NIOSH-Ca (National Institute for Occupational Safety and Health)**
    - None of the ingredients is listed.

- **Product related hazard informations:**
  - The product has been classified and marked in accordance with directives on hazardous materials.

  - **Hazard symbols:**
    - Irritant
    - Highly flammable

  - **Risk phrases:**
    - Highly flammable.
    - Irritating to eyes.
    - Vapours may cause drowsiness and dizziness.
Safety Data Sheet
acc. to OSHA HCS

Trade name: HAND-I-SAN

· Safety phrases:
Keep container tightly closed and in a well-ventilated place.
Keep away from sources of ignition - No smoking.
Do not breathe vapour/spray.
This material and its container must be disposed of as hazardous waste.
· 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.

· Contact: Jim Faller/Keith Seyfried
· Date of preparation / last revision 11/18/2014 / 1
· 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
  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)
  NFPA: National Fire Protection Association (USA)
  HMIS: Hazardous Materials Identification System (USA)
  VOC: Volatile Organic Compounds (USA, EU)
  LC50: Lethal concentration, 50 percent
  LD50: Lethal dose, 50 percent
  Flam. Liq. 2: Flammable liquids, Hazard Category 2
  Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A
  STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

· * Data compared to the previous version altered.