1 Identification

Product identifier
Trade name: Standard Gel Sat KCl/AgCl
Article number: 63004351

Relevant identified uses of the substance or mixture and uses advised against
Application of the substance / the preparation Laboratory chemicals

Details of the supplier of the safety data sheet
Manufacturer/Supplier: Endress+Hauser Conducta Inc.
4123 E. La Palma Ave., Suite 200
Anaheim
CA 92807-1813
USA

Information department:
Phone: +49 (0)7156 209-117
Fax.: +49 (0)7156 209-222
E-Mail: conducta_service@endress.com

Emergency telephone number: Phone: +49(0)6131-19240

2 Hazard(s) identification

Classification of the substance or mixture
The product is not classified according to the Globally Harmonized System (GHS).

Classification according to Directive 67/548/EEC or Directive 1999/45/EC Not applicable.

Information concerning particular hazards for human and environment:
The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

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:
Observe the general safety regulations when handling chemicals.
The product is not subject to identification regulations according to directives on hazardous materials.

Safety phrases:
29 Do not empty into drains.

Classification system:
NFPA ratings (scale 0 - 4)

\[
\begin{array}{c|c|c|c}
& Health & Fire & Reactivity \\
\hline
0 & 0 & 0 & 0 \\
\end{array}
\]

HMIS-ratings (scale 0 - 4)

\[
\begin{array}{c|c|c|c}
& Health & Fire & Reactivity \\
\hline
HEALTH & 0 & 0 & 0 \\
FIRE & 0 & 0 & 0 \\
REACTIVITY & 0 & 0 & 0 \\
\end{array}
\]

Other hazards
The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.

Results of PBT and vPvB assessment
PBT: Not applicable.
3 Composition/information on ingredients

Chemical characterization: Mixtures

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

<table>
<thead>
<tr>
<th>Dangerous components:</th>
</tr>
</thead>
<tbody>
<tr>
<td>56-81-5 glycerol</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non Dangerous Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>7447-40-7 potassium chloride</td>
</tr>
<tr>
<td>9004-62-0 Hydroxyethylcellulose</td>
</tr>
<tr>
<td>7783-90-6 silver chloride</td>
</tr>
<tr>
<td>82784-95-0 Zonyl FSJ</td>
</tr>
<tr>
<td>7732-18-5 water, distilled or of similar purity</td>
</tr>
</tbody>
</table>

Additional information: For the wording of the listed risk phrases refer to section 16.

4 First-aid measures

Description of first aid measures

General information: No special measures required.

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact: Generally the product does not irritate the skin.

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.

For safety reasons unsuitable extinguishing agents:

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 product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.

Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Reference to other sections
No dangerous substances are released.
See Section 7 for information on safe handling.
7 Handling and storage

Handling:

Precautions for safe handling: No special measures required.

Information about protection against explosions and fires: No special measures required.

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: None.

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

<table>
<thead>
<tr>
<th>Components with limit values that require monitoring at the workplace:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>56-81-5 glycerol</strong></td>
</tr>
<tr>
<td>PEL Long-term value: 15* 5** mg/m³</td>
</tr>
<tr>
<td>TLV  *total dust **respirable fraction withdrawn-insufficient data human occup. exp.</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:
The usual precautionary measures for handling chemicals should be followed.

Breathing equipment: Not required.

Protection of hands: No chemical-protective gloves required.

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.

Eye protection: Goggles recommended during refilling.

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:

<table>
<thead>
<tr>
<th>Form:</th>
<th>Viscous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color:</td>
<td>Opaque</td>
</tr>
<tr>
<td>Odor:</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odour threshold:</td>
<td>Not determined.</td>
</tr>
</tbody>
</table>
**Safety Data Sheet**  
acc. to OSHA HCS

*Printing date 07/31/2013  Reviewed on 09/19/2012*

**Trade name:** Standard Gel Sat KCl/AgCl

---

### 37.1.0 Important information on protection of health and environment, and on safety.

#### pH-value at 20 °C (68 °F):

- **6**

#### Change in condition

- **Melting point/Melting range:** Undetermined.
- **Boiling point/Boiling range:** Undetermined.

#### Flash point:

- Not applicable.

#### Flammability (solid, gaseous):

- Not applicable.

#### Ignition temperature:

- 400 °C (752 °F)

#### Decomposition temperature:

- Not determined.

#### Auto igniting:

- Product is not self-igniting.

#### Danger of explosion:

- Product does not present an explosion hazard.

#### Explosion limits:

- **Lower:** 0.9 Vol %
- **Upper:** Not determined.

#### Vapor pressure at 20 °C (68 °F):

- 23 hPa (17 mm Hg)

#### Density at 20 °C (68 °F):

- **1.6 g/cm³ (13.352 lbs/gal)**

#### Relative density:

- Not determined.

#### Vapour density:

- Not determined.

#### Evaporation rate:

- Not determined.

#### Solubility in / Miscibility with Water:

- Not miscible or difficult to mix.

#### Partition coefficient (n-octanol/water):

- Not determined.

#### Viscosity:

- **Dynamic:** Not determined.
- **Kinematic:** Not determined.

#### Solvent content:

- **Organic solvents:** 30.0 %
- **Water:** 43.8 %

#### Other information

- No further relevant information available.

---

### 10 Stability and reactivity

#### Reactivity

- **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:**
    - No dangerous decomposition products known.

---

### 11 Toxicological information

#### Information on toxicological effects

- **Acute toxicity:**

  - **LD/LC50 values that are relevant for classification:**
    - **56-81-5 glycerol**
      - **Oral LD50:** 12600 mg/kg (rat)

---

(Contd. on page 5)
37.1.0

<table>
<thead>
<tr>
<th>Substance</th>
<th>Oral LD50</th>
</tr>
</thead>
<tbody>
<tr>
<td>potassium chloride</td>
<td>2600 mg/kg (rat)</td>
</tr>
<tr>
<td>Hydroxyethylcellulose</td>
<td>&gt;2000 mg/kg (rat)</td>
</tr>
</tbody>
</table>

**Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.

**Sensitization:** No sensitizing effects known.

**Additional toxicological information:**
The product is not subject to classification according to internally approved calculation methods for preparations:
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

**Carcinogenic categories**

<table>
<thead>
<tr>
<th>Agency</th>
<th>Substance</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>IARC</td>
<td>ethanol</td>
<td>1</td>
</tr>
</tbody>
</table>

**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.

**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:** Smaller quantities can be disposed of with household waste.

**Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

**14 Transport information**

<table>
<thead>
<tr>
<th>UN-Number</th>
<th>DOT, ADR, ADN, IMDG, IATA</th>
<th>Void</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>DOT</td>
<td>void</td>
</tr>
<tr>
<td></td>
<td>ADR, ADN, IMDG, IATA</td>
<td>Void</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>DOT, ADR, ADN, IMDG, IATA</td>
<td>Void</td>
</tr>
<tr>
<td>Class</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Packing group</td>
<td>DOT, ADR, IMDG, IATA</td>
<td>Void</td>
</tr>
</tbody>
</table>
Trade name: Standard Gel Sat KCl/AgCl

Environmental hazards:
Marine pollutant: No

Special precautions for user: Not applicable.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.

Transport/Additional information: Not dangerous according to the above specifications.

UN "Model Regulation": -

15 Regulatory information

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

Sara
Section 355 (extremely hazardous substances):
None of the ingredient is listed.

Section 313 (Specific toxic chemical listings):
None of the ingredients is listed.

TSCA (Toxic Substances Control Act):
- glycerol 56-81-5
- potassium chloride 7447-40-7
- Hydroxyethylcellulose 9004-62-0
- silver chloride 7783-90-6
- N-alkyl dimethylbenzyl ammonium chloride 68424-85-1
- ethanol 64-17-5
- water, distilled or of similar purity 7732-18-5

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:
- ethanol 64-17-5

Cancerogenity categories

EPA (Environmental Protection Agency)
None of the ingredients is listed.

TLV (Threshold Limit Value established by ACGIH)
- ethanol 64-17-5 [A3]

MAK (German Maximum Workplace Concentration)
- ethanol 64-17-5 [5]

NIOSH-Ca (National Institute for Occupational Safety and Health)
None of the ingredients is listed.

OSHA-Ca (Occupational Safety & Health Administration)
None of the ingredients is listed.

Product related hazard informations:
Observe the general safety regulations when handling chemicals.
The product is not subject to identification regulations according to directives on hazardous materials.

**Safety phrases:**
29 Do not empty into drains.

**National regulations:**

**Technical instructions (air):**

<table>
<thead>
<tr>
<th>Class</th>
<th>Share in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wasser</td>
<td>43.8</td>
</tr>
<tr>
<td>NK</td>
<td>30.0</td>
</tr>
</tbody>
</table>

**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.

**Department issuing MSDS:** PCC - TWSC

**Contact:**

**Abbreviations and acronyms:**
- ICAO: International Civil Aviation Organization
- RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
- 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)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent

* Data compared to the previous version altered.