Section 1. Identification

1.1 Product identifier

Product name: 3100 OFFGEL 12 Well Frame Set, Part Number 5188-8012
Part No. (Chemical Kit): 5188-8012
Part No.:
- Glycerol 50 percent: 5188-6440
- Mineral Oil: 5188-6443

Validation date: 07/28/2014.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Material uses:
- Not available.
  - Glycerol 50 percent: 10 ml
  - Mineral Oil: 50 ml

1.3 Details of the supplier of the safety data sheet

Supplier/Manufacturer: Agilent Technologies, Inc.
Logistics Center - Americas
500 Ships Landing Way
New Castle, Delaware 19720
800-227-9770

1.4 Emergency telephone number

In case of emergency: CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

2.1 Classification of the substance or mixture

OSHA/HCS status:
- Glycerol 50 percent: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
- Mineral Oil: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

Glycerol 50 percent
H320: SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B
H373: SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

2.2 GHS label elements

Hazard pictograms:

Signal word:
- Glycerol 50 percent: Warning
- Mineral Oil: No signal word.

Date of issue: 07/28/2014
Section 2. Hazards identification

Hazard statements:
- Glycerol 50 percent: H320 - Causes eye irritation. H373 - May cause damage to organs through prolonged or repeated exposure.
- Mineral Oil: No known significant effects or critical hazards.

Precautionary statements:

Prevention:
- Glycerol 50 percent: P280 - Wear eye or face protection. P260 - Do not breathe vapor. P264 - Wash hands thoroughly after handling.
- Mineral Oil: Not applicable.

Response:
- Glycerol 50 percent: P314 - Get medical attention if you feel unwell. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention.
- Mineral Oil: Not applicable.

Storage:
- Glycerol 50 percent: Not applicable.
- Mineral Oil: Not applicable.

Disposal:
- Glycerol 50 percent: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Mineral Oil: Not applicable.

Supplemental label elements:
- Glycerol 50 percent: None known.
- Mineral Oil: Avoid contact with skin and clothing. Wash thoroughly after handling.

2.3 Other hazards

Hazards not otherwise classified:
- Glycerol 50 percent: None known.
- Mineral Oil: Defatting to the skin. Prolonged or repeated contact may dry skin and cause irritation.

Section 3. Composition/information on ingredients

Substance/mixture:
- Glycerol 50 percent: Mixture
- Mineral Oil: Substance

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol 50 percent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glycerol</td>
<td>30 - 60</td>
<td>56-81-5</td>
</tr>
<tr>
<td>Mineral Oil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White mineral oil (petroleum)</td>
<td>60 - 100</td>
<td>8042-47-5</td>
</tr>
</tbody>
</table>

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Date of issue: 07/28/2014
## Section 4. First aid measures

### 4.1 Description of necessary first aid measures

<table>
<thead>
<tr>
<th>Type</th>
<th>Substance</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eye contact</strong></td>
<td>Glycerol 50 percent</td>
<td>Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell.</td>
</tr>
<tr>
<td></td>
<td>Mineral Oil</td>
<td>Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention.</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td>Glycerol 50 percent</td>
<td>Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention following exposure or if feeling unwell. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.</td>
</tr>
<tr>
<td></td>
<td>Mineral Oil</td>
<td>Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.</td>
</tr>
<tr>
<td><strong>Skin contact</strong></td>
<td>Glycerol 50 percent</td>
<td>Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell. Wash clothing before reuse. Clean shoes thoroughly before reuse.</td>
</tr>
<tr>
<td></td>
<td>Mineral Oil</td>
<td>Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.</td>
</tr>
<tr>
<td><strong>Ingestion</strong></td>
<td>Glycerol 50 percent</td>
<td>Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention following exposure or if feeling unwell. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.</td>
</tr>
<tr>
<td></td>
<td>Mineral Oil</td>
<td>Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.</td>
</tr>
</tbody>
</table>
### Section 4. First aid measures

#### 4.2 Most important symptoms/effects, acute and delayed

**Potential acute health effects**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Glycerol 50 percent</th>
<th>Mineral Oil</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eye contact</strong></td>
<td>Causes eye irritation.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td><strong>Skin contact</strong></td>
<td>No known significant effects or critical hazards. Defatting to the skin. May cause skin dryness and irritation.</td>
<td></td>
</tr>
<tr>
<td><strong>Ingestion</strong></td>
<td>May be irritating to mouth, throat and stomach.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

**Over-exposure signs/symptoms**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Glycerol 50 percent</th>
<th>Mineral Oil</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eye contact</strong></td>
<td>Adverse symptoms may include the following: irritation watering redness</td>
<td></td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td>No specific data.</td>
<td>No specific data.</td>
</tr>
<tr>
<td><strong>Skin contact</strong></td>
<td>No specific data.</td>
<td>Adverse symptoms may include the following: irritation dryness cracking</td>
</tr>
<tr>
<td><strong>Ingestion</strong></td>
<td>No specific data.</td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

**4.3 Indication of immediate medical attention and special treatment needed, if necessary**

**Notes to physician**

<table>
<thead>
<tr>
<th>Glycerol 50 percent</th>
<th>Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.</th>
<th>Mineral Oil</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Specific treatments</strong></td>
<td>No specific treatment.</td>
<td>No specific treatment.</td>
</tr>
<tr>
<td><strong>Protection of first-aiders</strong></td>
<td>No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.</td>
<td>No action shall be taken involving any personal risk or without suitable training.</td>
</tr>
</tbody>
</table>

See toxicological information (Section 11)
Section 5. Fire-fighting measures

5.1 Extinguishing media

<table>
<thead>
<tr>
<th>Suitable extinguishing media</th>
<th>Glycerol 50 percent</th>
<th>Use an extinguishing agent suitable for the surrounding fire.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mineral Oil</td>
<td>Use dry chemical, CO₂, alcohol-resistant foam or water spray (fog).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unsuitable extinguishing media</th>
<th>Glycerol 50 percent</th>
<th>None known.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mineral Oil</td>
<td>Do not use water jet.</td>
</tr>
</tbody>
</table>

5.2 Special hazards arising from the substance or mixture

<table>
<thead>
<tr>
<th>Specific hazards arising from the chemical</th>
<th>Glycerol 50 percent</th>
<th>In a fire or if heated, a pressure increase will occur and the container may burst.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mineral Oil</td>
<td>In a fire or if heated, a pressure increase will occur and the container may burst.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous thermal decomposition products</th>
<th>Decomposition products may include the following materials:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>carbon dioxide</td>
</tr>
<tr>
<td></td>
<td>carbon monoxide</td>
</tr>
</tbody>
</table>

5.3 Advice for firefighters

<table>
<thead>
<tr>
<th>Special protective actions for fire-fighters</th>
<th>Glycerol 50 percent</th>
<th>Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mineral Oil</td>
<td>Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Special protective equipment for fire-fighters</th>
<th>Glycerol 50 percent</th>
<th>Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mineral Oil</td>
<td>Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.</td>
</tr>
</tbody>
</table>

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

<table>
<thead>
<tr>
<th>For non-emergency personnel</th>
<th>No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>For emergency responders</th>
<th>If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in &quot;For non-emergency personnel&quot;.</th>
</tr>
</thead>
</table>

6.2 Environmental precautions

<table>
<thead>
<tr>
<th>Glycerol 50 percent</th>
<th>Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mineral Oil</td>
<td>Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).</td>
</tr>
</tbody>
</table>

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Section 6. Accidental release measures

caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

Glycerol 50 percent
Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Mineral Oil
Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

7.1 Precautions for safe handling

Protective measures
Glycerol 50 percent
Put on appropriate personal protective equipment (see Section 8). Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Mineral Oil
Put on appropriate personal protective equipment (see Section 8).

Advice on general occupational hygiene
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities
Glycerol 50 percent
Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Mineral Oil
Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

7.3 Specific end use(s)
Section 7. Handling and storage

**Recommendations**

- Glycerol 50 percent
- Mineral Oil

**Industrial sector specific solutions**

- Not applicable.

Section 8. Exposure controls/personal protection

8.1 Control parameters

**Occupational exposure limits**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol 50 percent</td>
<td>OSHA PEL (United States, 2/2013). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction. TWA: 15 mg/m³ 8 hours. Form: Total dust</td>
</tr>
<tr>
<td>Glycerol</td>
<td>OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction. TWA: 10 mg/m³ 8 hours. Form: Total dust</td>
</tr>
<tr>
<td>Mineral Oil</td>
<td>ACGIH TLV (United States, 6/2013). TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction.</td>
</tr>
<tr>
<td>White mineral oil (petroleum)</td>
<td>NIOSH REL (United States, 10/2013). TWA: 5 mg/m³ 10 hours. Form: Mist. STEL: 10 mg/m³ 15 minutes. Form: Mist</td>
</tr>
</tbody>
</table>

8.2 Exposure controls

**Appropriate engineering controls**

- If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Environmental exposure controls**

- Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**Individual protection measures**

**Hygiene measures**

- Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.
- Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection**

- Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
Section 8. Exposure controls/personal protection

**Hand protection**: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Body protection**: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection**: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection**: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

**Appearance**

**Physical state**: Glycerol 50 percent - Liquid.  
Mineral Oil - Liquid. [Oily liquid.]

**Color**: Glycerol 50 percent - Not available.  
Mineral Oil - Colorless.

**Odor**: Glycerol 50 percent - Not available.  
Mineral Oil - Not available.

**Odor threshold**: Glycerol 50 percent - Not available.  
Mineral Oil - Not available.

**pH**: Glycerol 50 percent - Not available.  
Mineral Oil - Not available.

**Melting point**: Glycerol 50 percent - Not available.  
Mineral Oil - -60 to -9°C (-76 to 15.8°F)

**Boiling point**: Glycerol 50 percent - Not available.  
Mineral Oil - 179 to 210°C (354.2 to 410°F)

**Flash point**: Glycerol 50 percent - Not available.  
Mineral Oil - Closed cup: 135°C (275°F)

**Evaporation rate**: Glycerol 50 percent - Not available.  
Mineral Oil - Not available.

**Flammability (solid, gas)**: Glycerol 50 percent - Not applicable.  
Mineral Oil - Not applicable.

**Lower and upper explosive (flammable) limits**: Glycerol 50 percent - Not available.  
Mineral Oil - Not available.

**Vapor pressure**: Glycerol 50 percent - Not available.  
Mineral Oil - 0.011 kPa (0.08 mm Hg) [room temperature]

**Vapor density**: Glycerol 50 percent - Not available.  
Mineral Oil - Not available.

**Relative density**: Glycerol 50 percent - Not available.  
Mineral Oil - 0.875 to 0.905
Section 9. Physical and chemical properties

**Solubility**
- Glycerol 50 percent: Soluble in the following materials: cold water and hot water.
- Mineral Oil: Soluble in the following materials: diethyl ether. Insoluble in the following materials: cold water and hot water.

**Solubility in water**
- Not available.

**Partition coefficient: n-octanol/water**
- Glycerol 50 percent: Not available.
- Mineral Oil: >6

**Auto-ignition temperature**
- Glycerol 50 percent: Not available.
- Mineral Oil: 260 to 371.11°C (500 to 700°F)

**Decomposition temperature**
- Glycerol 50 percent: Not available.
- Mineral Oil: Not available.

**Viscosity**
- Glycerol 50 percent: Not available.
- Mineral Oil: Kinematic (40°C (104°F)): >0.013 cm²/s (>1.3 cSt)

Section 10. Stability and reactivity

**10.1 Reactivity**
- Glycerol 50 percent: No specific test data related to reactivity available for this product or its ingredients.
- Mineral Oil: No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical stability**
- Glycerol 50 percent: The product is stable.
- Mineral Oil: The product is stable.

**10.3 Possibility of hazardous reactions**
- Glycerol 50 percent: Under normal conditions of storage and use, hazardous reactions will not occur.
- Mineral Oil: Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid**
- Glycerol 50 percent: No specific data.
- Mineral Oil: No specific data.

**10.5 Incompatible materials**
- Glycerol 50 percent: No specific data.
- Mineral Oil: No specific data.

**10.6 Hazardous decomposition products**
- Glycerol 50 percent: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- Mineral Oil: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

**11.1 Information on toxicological effects**

**Acute toxicity**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol 50 percent</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>12600 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Glycerol</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mineral Oil</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White mineral oil (petroleum)</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>&gt;5000 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

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Section 11. Toxicological information

### Sensitization

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Route of exposure</th>
<th>Species</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mineral Oil</td>
<td>skin</td>
<td>Guinea pig</td>
<td>Not sensitizing</td>
</tr>
</tbody>
</table>

### Mutagenicity

Not available.

### Carcinogenicity

Not available.

### Reproductive toxicity

Not available.

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol 50 percent</td>
<td>Category 2</td>
<td>Inhalation</td>
<td>kidneys</td>
</tr>
<tr>
<td>Glycerol</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Aspiration hazard

Not available.

### Information on the likely routes of exposure

Not available.

### Potential acute health effects

#### Eye contact

- **Glycerol 50 percent**
  - Causes eye irritation.
- **Mineral Oil**
  - No known significant effects or critical hazards.

#### Inhalation

- **Glycerol 50 percent**
  - No known significant effects or critical hazards.
- **Mineral Oil**
  - No known significant effects or critical hazards.

#### Skin contact

- **Glycerol 50 percent**
  - Defatting to the skin. May cause skin dryness and irritation.
- **Mineral Oil**
  - No known significant effects or critical hazards.

#### Ingestion

- **Glycerol 50 percent**
  - May be irritating to mouth, throat and stomach.
- **Mineral Oil**
  - No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics
Section 11. Toxicological information

**Eye contact**
- **Glycerol 50 percent**
  - Mineral Oil
  - Adverse symptoms may include the following:
    - irritation
    - watering
    - redness
- **Mineral Oil**
  - No specific data.

**Inhalation**
- **Glycerol 50 percent**
  - No specific data.
- **Mineral Oil**
  - No specific data.

**Skin contact**
- **Glycerol 50 percent**
  - Mineral Oil
  - Adverse symptoms may include the following:
    - irritation
    - dryness
    - cracking
- **Mineral Oil**
  - No specific data.

**Ingestion**
- **Glycerol 50 percent**
  - Mineral Oil
  - No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

**Short term exposure**
- **Potential immediate effects**
  - Not available.
- **Potential delayed effects**
  - Not available.

**Long term exposure**
- **Potential immediate effects**
  - Not available.
- **Potential delayed effects**
  - Not available.

Potential chronic health effects
Not available.

**General**
- **Glycerol 50 percent**
  - Mineral Oil
  - May cause damage to organs through prolonged or repeated exposure.
  - Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

**Carcinogenicity**
- **Glycerol 50 percent**
  - Mineral Oil
  - No known significant effects or critical hazards.

**Mutagenicity**
- **Glycerol 50 percent**
  - Mineral Oil
  - No known significant effects or critical hazards.

**Teratogenicity**
- **Glycerol 50 percent**
  - Mineral Oil
  - No known significant effects or critical hazards.

**Developmental effects**
- **Glycerol 50 percent**
  - Mineral Oil
  - No known significant effects or critical hazards.

**Fertility effects**
- **Glycerol 50 percent**
  - Mineral Oil
  - No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates
Not available.

Other information
- **Glycerol 50 percent**
  - Mineral Oil
  - Not available.
Section 12. Ecological information

12.1 Toxicity
Not available.

12.2 Persistence and degradability
Not available.

12.3 Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP_{ow}</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol 50 percent</td>
<td>-1.76</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td>Glycerol</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mineral Oil</td>
<td>&gt;6</td>
<td>-</td>
<td>high</td>
</tr>
<tr>
<td>White mineral oil (petroleum)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12.4 Mobility in soil
Soil/water partition coefficient (K_{oc}) : Not available.

12.5 Other adverse effects
Glycerol 50 percent : No known significant effects or critical hazards.
Mineral Oil : No known significant effects or critical hazards.

Section 13. Disposal considerations

13.1 Waste treatment methods

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.
Section 14. Transport information

Regulatory information
DOT / IMDG / IATA : Not regulated.

Section 15. Regulatory information

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

U.S. Federal regulations : TSCA 8(a) CDR Exempt/Partial exemption: All components are listed or exempted.
United States inventory (TSCA 8b): All components are listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed
Clean Air Act Section 602 Class I Substances : Not listed
Clean Air Act Section 602 Class II Substances : Not listed
DEA List I Chemicals (Precursor Chemicals) : Not listed
DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304
Composition/information on ingredients
No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312
Classification : Immediate (acute) health hazard
Delayed (chronic) health hazard

Composition/information on ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>%</th>
<th>Fire hazard</th>
<th>Sudden release of pressure</th>
<th>Reactive</th>
<th>Immediate (acute) health hazard</th>
<th>Delayed (chronic) health hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol 50 percent Glycerol</td>
<td>30 - 60</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
<td>Yes.</td>
<td>Yes.</td>
</tr>
<tr>
<td>Mineral Oil</td>
<td>60 - 100</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
<td>Yes.</td>
<td>No.</td>
</tr>
</tbody>
</table>

State regulations
Massachusetts : The following components are listed: GLYCERINE MIST
New York : None of the components are listed.
New Jersey : The following components are listed: GLYCERIN; 1,2,3-PROPANETRIOL; OIL MIST, MINERAL; MINERAL OIL (HIGHLY REFINED)
Pennsylvania : The following components are listed: 1,2,3-PROPANETRIOL
California Prop. 65 : No products were found.
Canada inventory : All components are listed or exempted.

International regulations

Date of issue : 07/28/2014
Section 15. Regulatory information

International lists:
- **Australia inventory (AICS)**: All components are listed or exempted.
- **China inventory (IECSC)**: All components are listed or exempted.
- **Japan inventory**: Not determined.
- **Korea inventory**: All components are listed or exempted.
- **Malaysia Inventory (EHS Register)**: Not determined.
- **New Zealand Inventory of Chemicals (NZIoC)**: All components are listed or exempted.
- **Philippines inventory (PICCS)**: All components are listed or exempted.
- **Taiwan inventory (CSNN)**: Not determined.

Chemical Weapons Convention List Schedule I Chemicals: Not listed
Chemical Weapons Convention List Schedule II Chemicals: Not listed
Chemical Weapons Convention List Schedule III Chemicals: Not listed

Section 16. Other information

History
- **Date of issue**: 07/28/2014.
- **Date of previous issue**: 01/30/2008.
- **Version**: 2

⚠ Indicates information that has changed from previously issued version.

Notice to reader

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