Section 1. Identification

1.1 Product identifier

Product name: Alcoholic Congo Red
Part no.: AR161
Validation date: 11/19/2021

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

Material uses: Laboratory use
Container type: Dispenser Pack
AR161 // Alcoholic Congo Red // Artisan Congo Red Stain Kit // 65mL and 115 mL
Reference number: SDS007

1.3 Details of the supplier of the safety data sheet

Supplier/Manufacturer: Agilent Technologies, Inc.
5301 Stevens Creek Blvd
Santa Clara, CA 95051, USA
Tel: +1 800 227 9770

Agilent Technologies Singapore (International) Pte Ltd.
No. 1 Yishun Avenue 7
Singapore, 768923
Tel. (65) 6276 2622

Agilent Technologies Denmark ApS
Produktionsvej 42
2600 Glostrup,
Denmark
Tel. +45 44 85 95 00

www.Agilent.com

e-mail address of person responsible for this SDS: SDS@Agilent.com

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: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

H225 FLAMMABLE LIQUIDS - Category 2
H319 EYE IRRITATION - Category 2A
H350 CARCINOGENICITY - Category 1B
H361 TOXIC TO REPRODUCTION - Category 2
H371 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 2

2.2 GHS label elements

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Section 2. Hazards identification

**Signal word**
- Danger

**Hazard statements**
- H225 - Highly flammable liquid and vapor.
- H319 - Causes serious eye irritation.
- H350 - May cause cancer.
- H361 - Suspected of damaging fertility or the unborn child.
- H371 - May cause damage to organs. (central nervous system (CNS), optic nerve)

**Precautionary statements**

**Prevention**
- P201 - Obtain special instructions before use.
- P280 - Wear protective gloves, protective clothing and eye or face protection.
- P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P241 - Use explosion-proof electrical, ventilating or lighting equipment.
- P242 - Use non-sparking tools.
- P243 - Take action to prevent static discharges.
- P233 - Keep container tightly closed.
- P260 - Do not breathe vapor.
- P270 - Do not eat, drink or smoke when using this product.

**Response**
- P308 + P311 - IF exposed or concerned: Call a POISON CENTER or doctor.
- 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 advice or attention.

**Storage**
- P403 + P235 - Store in a well-ventilated place. Keep cool.

**Disposal**
- P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

**2.3 Other hazards**

**Hazards not otherwise classified**
- None known.

Section 3. Composition/information on ingredients

**Mixture**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>≥50 - ≤75</td>
<td>64-17-5</td>
</tr>
<tr>
<td>Propan-2-ol</td>
<td>≤10</td>
<td>67-63-0</td>
</tr>
<tr>
<td>Methanol</td>
<td>≤4.7</td>
<td>67-56-1</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>≤2</td>
<td>7647-14-5</td>
</tr>
<tr>
<td>disodium 3,3’-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate)</td>
<td>≤0.3</td>
<td>573-58-0</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 and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.
Section 4. First aid measures

4.1 Description of necessary first aid measures

**Eye contact**: 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. If necessary, call a poison center or physician.

**Inhalation**: 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. If necessary, call a poison center or physician. 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.

**Skin contact**: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**Ingestion**: Wash out mouth with water. Remove dentures if any. 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. If necessary, call a poison center or physician. 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.

4.2 Most important symptoms/effects, acute and delayed

**Potential acute health effects**

- **Eye contact**: Causes serious eye irritation.
- **Inhalation**: May cause damage to organs following a single exposure if inhaled.
- **Skin contact**: May cause damage to organs following a single exposure in contact with skin.
- **Ingestion**: May cause damage to organs following a single exposure if swallowed.

**Over-exposure signs/symptoms**

- **Eye contact**: Adverse symptoms may include the following: pain or irritation, watering, redness.
- **Inhalation**: Adverse symptoms may include the following: reduced fetal weight, increase in fetal deaths, skeletal malformations.
- **Skin contact**: Adverse symptoms may include the following: reduced fetal weight, increase in fetal deaths, skeletal malformations.
- **Ingestion**: Adverse symptoms may include the following: reduced fetal weight, increase in fetal deaths, skeletal malformations.

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

- **Notes to physician**: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- **Specific treatments**: No specific treatment.

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Section 4. First aid measures

Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media: Use dry chemical, CO₂, water spray (fog) or foam.

Unsuitable extinguishing media: Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical: Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

Hazardous thermal decomposition products: Decomposition products may include the following materials:
- carbon dioxide
- carbon monoxide
- halogenated compounds
- metal oxide/oxides
- Formaldehyde.

Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

5.3 Advice for firefighters

Special protective actions for fire-fighters: 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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: 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. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialized 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 "For non-emergency personnel".

6.2 Environmental precautions: 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).

6.3 Methods and materials for containment and cleaning up

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Section 6. Accidental release measures

Methods for cleaning up: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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: Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

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: Specific storage conditions: Please consult the label. Store in accordance with local regulations. Store in a segregated and approved area. 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. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. 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. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

Recommendations: Industrial applications, Professional applications.

Industrial sector specific solutions: Not available.

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></td>
<td>STEL: 1000 ppm 15 minutes. TWA: 1000 ppm 8 hours. TWA: 1900 mg/m³ 8 hours. TWA: 1000 ppm 10 hours. TWA: 1900 mg/m³ 10 hours.</td>
</tr>
</tbody>
</table>

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## Section 8. Exposure controls/personal protection

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Propan-2-ol</td>
<td>TWA: 200 ppm 8 hours.</td>
<td>TWA: 200 ppm 8 hours.</td>
<td>TWA: 400 ppm 10 hours.</td>
<td>TWA: 400 ppm 10 hours.</td>
<td>TWA: 200 ppm 8 hours.</td>
</tr>
<tr>
<td></td>
<td>STEL: 400 ppm 15 minutes.</td>
<td>STEL: 262 mg/m³ 8 hours.</td>
<td>STEL: 500 ppm 15 minutes.</td>
<td>STEL: 1225 mg/m³ 15 minutes.</td>
<td>STEL: 260 mg/m³ 8 hours.</td>
</tr>
<tr>
<td></td>
<td>TWA: 200 ppm 8 hours.</td>
<td>TWA: 262 mg/m³ 8 hours.</td>
<td>TWA: 250 ppm 15 minutes.</td>
<td>TWA: 260 mg/m³ 10 hours.</td>
<td>TWA: 250 ppm 15 minutes.</td>
</tr>
<tr>
<td></td>
<td>STEL: 250 ppm 15 minutes.</td>
<td>STEL: 328 mg/m³ 15 minutes.</td>
<td>STEL: 325 mg/m³ 15 minutes.</td>
<td>STEL: 260 mg/m³ 10 hours.</td>
<td>STEL: 325 mg/m³ 15 minutes.</td>
</tr>
<tr>
<td>Sodium chloride disodium 3,3’-[[1,1’-biphenyl]-4,4’-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate)</td>
<td>None.</td>
<td>None.</td>
<td>None.</td>
<td>None.</td>
<td>None.</td>
</tr>
</tbody>
</table>

### 8.2 Exposure controls

#### Appropriate engineering controls

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

#### 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
Section 8. Exposure controls/personal protection

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.

Skin 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.

Hand 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. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Body 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.

Other skin protection: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state: Liquid.
Color: Red.
Odor: Alcohol-like.
Odor threshold: Not available.
pH: Not available.
Melting point/freezing point: Not available.
Boiling point, initial boiling point, and boiling range: Not available.
Flash point: Closed cup: 16.6°C (61.9°F)
Evaporation rate: Not available.
Flammability: Not applicable.
Lower and upper explosion limit/flammability limit: Lower: 3.3%
Upper: 19%

Vapor pressure:

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Vapor Pressure at 20°C</th>
<th>Vapor pressure at 50°C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mm Hg</td>
<td>kPa</td>
</tr>
<tr>
<td>Methanol</td>
<td>126.96</td>
<td>16.9</td>
</tr>
<tr>
<td>Ethanol</td>
<td>42.95</td>
<td>5.7</td>
</tr>
</tbody>
</table>

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Section 9. Physical and chemical properties and safety characteristics

- **Relative vapor density**: Not available.
- **Relative density**: Not available.
- **Solubility**: Soluble in the following materials: cold water and hot water.
- **Miscible with water**: Yes.
- **Partition coefficient: n-octanol/water**: Not applicable.
- **Auto-ignition temperature**: Not applicable.
- **Decomposition temperature**: Not available.
- **Viscosity**: Not available.
- **Particle characteristics**
  - **Median particle size**: Not applicable.

### Auto-ignition temperature

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>°C</th>
<th>°F</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>455</td>
<td>851</td>
<td>DIN 51794</td>
</tr>
<tr>
<td>Methanol</td>
<td>455</td>
<td>851</td>
<td>DIN 51794</td>
</tr>
</tbody>
</table>

Section 10. Stability and reactivity

10.1 **Reactivity**: No specific test data related to reactivity available for this product or its ingredients.

10.2 **Chemical stability**: The product is stable.

10.3 **Possibility of hazardous reactions**: Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 **Conditions to avoid**: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

10.5 **Incompatible materials**: Reactive or incompatible with the following materials: oxidizing materials

10.6 **Hazardous decomposition products**: 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>Ethanol</td>
<td>LC50 Inhalation Vapor</td>
<td>Rat</td>
<td>124700 mg/m³</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>7 g/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>12800 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>5000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Propan-2-ol</td>
<td>LC50 Inhalation Vapor</td>
<td>Rat</td>
<td>189.95 mg/l</td>
<td>1 hours</td>
</tr>
<tr>
<td></td>
<td>LD50 Inhalation Vapor</td>
<td>Rat</td>
<td>145000 ppm</td>
<td>1 hours</td>
</tr>
<tr>
<td></td>
<td>LC50 Inhalation Vapor</td>
<td>Rat</td>
<td>83.84 mg/l</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LC50 Inhalation Vapor</td>
<td>Rat</td>
<td>64000 ppm</td>
<td>4 hours</td>
</tr>
<tr>
<td>Methanol</td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>15800 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>5600 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>3000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>disodium 3,3’-[[1,1’-biphenyl]-4,4’-diylbis(azo)]bis (4-aminonaphthalene-1-sulphonate)</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>15200 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

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Section 11. Toxicological information

**Irritation/Corrosion**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Score</th>
<th>Exposure</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 mg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>0.066666667 minutes 100 mg</td>
<td>-</td>
</tr>
<tr>
<td>Propan-2-ol</td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 100 mg</td>
<td>-</td>
</tr>
<tr>
<td>Methanol</td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>10 mg</td>
<td>-</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>500 mg</td>
<td>-</td>
</tr>
<tr>
<td>disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate)</td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>40 mg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 100 mg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>10 mg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 100 mg</td>
<td>-</td>
</tr>
</tbody>
</table>

**Conclusion/Summary**

*Skin*: Repeated exposure may cause skin dryness or cracking.

**Sensitization**

Not available.

**Mutagenicity**

**Conclusion/Summary**: Not available.

**Carcinogenicity**

**Conclusion/Summary**: Not available.

**Classification**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>OSHA</th>
<th>IARC</th>
<th>NTP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Propan-2-ol</td>
<td>-</td>
<td>3</td>
<td>-</td>
</tr>
</tbody>
</table>

**Reproductive toxicity**

**Conclusion/Summary**: Not available.

**Teratogenicity**

**Conclusion/Summary**: Not available.

**Specific target organ toxicity (single exposure)**

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propan-2-ol</td>
<td>Category 3</td>
<td>-</td>
<td>Narcotic effects</td>
</tr>
<tr>
<td>Methanol</td>
<td>Category 1</td>
<td>-</td>
<td>central nervous system (CNS), optic nerve</td>
</tr>
</tbody>
</table>

**Specific target organ toxicity (repeated exposure)**

Not available.

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Section 11. Toxicological information

**Aspiration hazard**
Not available.

**Information on the likely routes of exposure**
Routes of entry anticipated: Oral, Dermal, Inhalation.

**Potential acute health effects**

<table>
<thead>
<tr>
<th>Route</th>
<th>Adverse symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eye contact</strong></td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td>May cause damage to organs following a single exposure if inhaled.</td>
</tr>
<tr>
<td><strong>Skin contact</strong></td>
<td>May cause damage to organs following a single exposure in contact with skin.</td>
</tr>
<tr>
<td><strong>Ingestion</strong></td>
<td>May cause damage to organs following a single exposure if swallowed.</td>
</tr>
</tbody>
</table>

**Symptoms related to the physical, chemical and toxicological characteristics**

<table>
<thead>
<tr>
<th>Route</th>
<th>Adverse symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eye contact</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td>Adverse symptoms may include the following: reduced fetal weight, increase in fetal deaths, skeletal malformations.</td>
</tr>
<tr>
<td><strong>Skin contact</strong></td>
<td>Adverse symptoms may include the following: reduced fetal weight, increase in fetal deaths, skeletal malformations.</td>
</tr>
<tr>
<td><strong>Ingestion</strong></td>
<td>Adverse symptoms may include the following: reduced fetal weight, increase in fetal deaths, skeletal malformations.</td>
</tr>
</tbody>
</table>

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

**Short term exposure**

<table>
<thead>
<tr>
<th>Potential immediate effects</th>
<th>Not available.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential delayed effects</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

**Long term exposure**

<table>
<thead>
<tr>
<th>Potential immediate effects</th>
<th>Not available.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential delayed effects</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

**Potential chronic health effects**

<table>
<thead>
<tr>
<th>General</th>
<th>No known significant effects or critical hazards.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carcinogenicity</td>
<td>May cause cancer. Risk of cancer depends on duration and level of exposure.</td>
</tr>
<tr>
<td>Mutagenicity</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Suspected of damaging fertility or the unborn child.</td>
</tr>
</tbody>
</table>

**Numerical measures of toxicity**

**Acute toxicity estimates**

Date of issue: 11/19/2021
Section 11. Toxicological information

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Oral (mg/kg)</th>
<th>Dermal (mg/kg)</th>
<th>Inhalation (gases) (ppm)</th>
<th>Inhalation (vapors) (mg/l)</th>
<th>Inhalation (dusts and mists) (mg/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcoholic Congo Red</td>
<td>2622.4</td>
<td>8333.3</td>
<td>N/A</td>
<td>83.3</td>
<td>N/A</td>
</tr>
<tr>
<td>Ethanol</td>
<td>7000</td>
<td>N/A</td>
<td>124.7</td>
<td>72.2</td>
<td>N/A</td>
</tr>
<tr>
<td>Propan-2-ol</td>
<td>5000</td>
<td>12800</td>
<td>N/A</td>
<td>3</td>
<td>N/A</td>
</tr>
<tr>
<td>Methanol</td>
<td>100</td>
<td>300</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>3000</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate)</td>
<td>15200</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Other information: Adverse symptoms may include the following: blurred or double vision, eye contact can result in corneal damage or blindness. Repeated or prolonged exposure to the substance can produce liver damage. Narcotic effect. May cause nervous system disturbances.

Section 12. Ecological information

12.1 Toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>Acute EC50 3306 mg/l Marine water</td>
<td>Algae - Ulva pertusa</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 1074 mg/l Fresh water</td>
<td>Crustaceans - Cypris subglobosa</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 5680 mg/l Fresh water</td>
<td>Daphnia - Daphnia magna - Neonate</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 1100000 µg/l Marine water</td>
<td>Fish - Alburnus alburnus</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 4.995 mg/l Marine water</td>
<td>Algae - Ulva pertusa</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 100 ul/L Fresh water</td>
<td>Daphnia - Daphnia magna - Neonate</td>
<td>21 days</td>
</tr>
<tr>
<td>Propan-2-ol</td>
<td>Acute EC50 7550 mg/l Fresh water</td>
<td>Daphnia - Daphnia magna - Neonate</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 1400000 µg/l Marine water</td>
<td>Crustaceans - Crangon crangon</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 4200 mg/l Fresh water</td>
<td>Fish - Rasbora heteromorpha</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 2736 mg/l Marine water</td>
<td>Algae - Ulva pertusa</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 2500000 µg/l Marine water</td>
<td>Crustaceans - Crangon crangon - Adult</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 3289 mg/l Fresh water</td>
<td>Daphnia - Daphnia magna - Neonate</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 290 mg/l Fresh water</td>
<td>Fish - Danio rerio - Egg</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 9.96 mg/l Marine water</td>
<td>Algae - Ulva pertusa</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 4.74 g/L Fresh water</td>
<td>Algae - Chlamydomonas reinhardtii</td>
<td>96 hours</td>
</tr>
<tr>
<td>Methanol</td>
<td>Acute LC50 519.6 mg/l Fresh water</td>
<td>Crustaceans - Cypris subglobosa</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 6.87 g/L Fresh water</td>
<td>Aquatic plants - Lemna minor</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 1000000 µg/l Fresh water</td>
<td>Fish - Morone saxatilis - Larvae</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic LC10 781 mg/l Fresh water</td>
<td>Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatching, Weanling)</td>
<td>3 weeks</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>Acute LC50 56000 to 1000000 µg/l Fresh water</td>
<td>Aquatic plants - Lemna minor</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 6 g/L Fresh water</td>
<td>Daphnia - Daphnia pulex</td>
<td>21 days</td>
</tr>
<tr>
<td>disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate)</td>
<td>Chronic NOEC 0.314 g/L Fresh water</td>
<td>Fish - Gambusia holbrooki - Adult</td>
<td>8 weeks</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 100 mg/l Fresh water</td>
<td>Fish - Oncorhynchus mykiss - Juvenile (Fledgling, Hatching, Weanling)</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 56000 to 1000000 µg/l Fresh water</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Section 12. Ecological information

12.2 Persistence and degradability

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Aquatic half-life</th>
<th>Photolysis</th>
<th>Biodegradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>-</td>
<td>-</td>
<td>Readily</td>
</tr>
<tr>
<td>Propan-2-ol</td>
<td>-</td>
<td>-</td>
<td>Readily</td>
</tr>
<tr>
<td>Methanol</td>
<td>-</td>
<td>-</td>
<td>Readily</td>
</tr>
</tbody>
</table>

12.3 Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP&lt;sub&gt;ow&lt;/sub&gt;</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>-0.35</td>
<td>0.5</td>
<td>low</td>
</tr>
<tr>
<td>Propan-2-ol</td>
<td>0.05</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td>Methanol</td>
<td>-0.77</td>
<td>&lt;10</td>
<td>low</td>
</tr>
</tbody>
</table>

12.4 Mobility in soil

Soil/water partition coefficient (K<sub>oc</sub>): Not available.

12.5 Other adverse effects: 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. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

United States - RCRA Toxic hazardous waste "U" List

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS #</th>
<th>Status</th>
<th>Reference number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol (I); Methyl alcohol (I)</td>
<td>67-56-1</td>
<td>Listed</td>
<td>U154</td>
</tr>
</tbody>
</table>

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.

Date of issue: 11/19/2021
## Section 14. Transport information

<table>
<thead>
<tr>
<th>DOT Classification</th>
<th>TDG Classification</th>
<th>Mexico Classification</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN number</td>
<td>UN1987</td>
<td>UN1987</td>
<td>UN1987</td>
<td>UN1987</td>
</tr>
<tr>
<td>UN proper shipping name</td>
<td>Alcohols, n.o.s. (Ethanol, Propan-2-ol, Methanol)</td>
<td>ALCOHOLS, N.O.S. (Ethanol, Propan-2-ol, Methanol)</td>
<td>ALCOHOL, N.O.S. (Ethanol, Propan-2-ol, Methanol)</td>
<td>Alcohols, n.o.s. (Ethanol, Propan-2-ol, Methanol)</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Packing group</td>
<td>II</td>
<td>II</td>
<td>II</td>
<td>II</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
</tr>
</tbody>
</table>

### Additional information

If shipped as part of a kit "UN3316 (Chemical kit), Class 9, PG II" can be used. Precondition: UN3316 must be allowed for the remaining vials in same kit too.

**DOT Classification**

- **Limited quantity**: Yes.
- **Quantity limitation**: Passenger aircraft/rail: 5 L. Cargo aircraft: 60 L.
- **Special provisions**: 172, IB2, T7, TP1, TP8, TP28

**TDG Classification**

- Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3).
- **Explosive Limit and Limited Quantity Index**: 1
- **Passenger Carrying Road or Rail Index**: 5
- **Special provisions**: 16, 150

**Mexico Classification**

- **Special provisions**: 274

**IMDG**

- **Emergency schedules**: F-E, S-D
- **Special provisions**: 274

**IATA**

- **The environmentally hazardous substance mark may appear if required by other transportation regulations.**
- **Special provisions**: A3, A180

**Special precautions for user**

- **Transport within user’s premises**: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to IMO instruments**

- Not available.

**Date of issue**: 11/19/2021
Section 15. Regulatory information

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

U.S. Federal regulations

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs): 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: FLAMMABLE LIQUIDS - Category 2
EYE IRRITATION - Category 2A
CARCINOGENICITY - Category 1B
TOXIC TO REPRODUCTION - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 2

Composition/information on ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>%</th>
<th>Classification</th>
</tr>
</thead>
</table>
| Ethanol                             | ≥50 - ≤75 | FLAMMABLE LIQUIDS - Category 2
EYE IRRITATION - Category 2A
HNOC - Defatting irritant            |
| Propan-2-ol                         | ≤10   | FLAMMABLE LIQUIDS - Category 2
EYE IRRITATION - Category 2A
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 |
| Methanol                            | ≤4.7  | HNOC - Defatting irritant
FLAMMABLE LIQUIDS - Category 2
ACUTE TOXICITY (oral) - Category 3
ACUTE TOXICITY (dermal) - Category 3
ACUTE TOXICITY (inhalation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1
EYE IRRITATION - Category 2A         |
| Sodium chloride disodium 3,3'-(1,1'-biphenyl)-4,4'-diylbis(4-aminonaphthalene-1-sulphonate) | ≤2 ≤0.3 | COMBUSTIBLE DUSTS
EYE IRRITATION - Category 2A
CARCINOGENICITY - Category 1B
TOXIC TO REPRODUCTION - Category 2 |

SARA 313

<table>
<thead>
<tr>
<th>Product name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form R - Reporting requirements</td>
<td>Methanol</td>
<td>67-56-1</td>
</tr>
<tr>
<td>Supplier notification</td>
<td>Methanol</td>
<td>67-56-1</td>
</tr>
</tbody>
</table>

Date of issue: 11/19/2021
Section 15. Regulatory information

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts: The following components are listed: ETHYL ALCOHOL; ETHANOL; DENATURED ALCOHOL; ISOPROPYL ALCOHOL; 2-PROPANOL; METHANOL; METHYL ALCOHOL

New York: The following components are listed: Methanol

New Jersey: The following components are listed: ETHYL ALCOHOL; METHYL CARBINOL; ETHANOL; ALCOHOL; ISOPROPYL ALCOHOL; 2-PROPANOL; ISOPROPA; METHYL ALCOHOL; WOOD ALCOHOL; METHANOL

Pennsylvania: The following components are listed: ETHANOL; DENATURED ALCOHOL; 2-PROPANOL; METHANOL

California Prop. 65

⚠️ WARNING: This product can expose you to chemicals including Benzidine [and its salts], which is known to the State of California to cause cancer, and Methanol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>No significant risk level</th>
<th>Maximum acceptable dosage level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>-</td>
<td>Yes.</td>
</tr>
<tr>
<td>Benzidine [and its salts]</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia: All components are listed or exempted.
Canada: All components are listed or exempted.
China: All components are listed or exempted.
Europe: All components are listed or exempted.
Japan: Japan inventory (CSCL): Not determined.
          Japan inventory (ISHL): Not determined.
New Zealand: All components are listed or exempted.
Philippines: All components are listed or exempted.
Republic of Korea: All components are listed or exempted.
Taiwan: All components are listed or exempted.
Thailand: Not determined.
Turkey: Not determined.
United States: All components are active or exempted.
Viet Nam: All components are listed or exempted.

Date of issue: 11/19/2021
Section 16. Other information

Procedure used to derive the classification

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLAMMABLE LIQUIDS - Category 2</td>
<td>On basis of test data</td>
</tr>
<tr>
<td>EYE IRRITATION - Category 2A</td>
<td>Calculation method</td>
</tr>
<tr>
<td>CARCINOGENICITY - Category 1B</td>
<td>Calculation method</td>
</tr>
<tr>
<td>TOXIC TO REPRODUCTION - Category 2</td>
<td>Calculation method</td>
</tr>
<tr>
<td>SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 2</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

History

Date of issue : 11/19/2021
Date of previous issue : 05/31/2020
Version : 5

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973
as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
UN = United Nations

Indicates information that has changed from previously issued version.

Notice to reader

Disclaimer: The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.