Section 1. Identification

1.1 Product identifier
Product name: TMB-Plus Substrate-Chromogen
Part no.: OU003, S1599
Validation date: 7/29/2020

1.2 Relevant identified uses of the substance or mixture and uses advised against
Material uses: Laboratory use
Container type: Bottle
OU003 // TMB+ Substrate-Chromogen // TMB+ Substrate System ELISA RTU (OEM) // 10 L
S1599 // TMB+ Substrate-Chromogen // 1000 mL
Reference number: SDS192

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
H315 SKIN IRRITATION - Category 2
H319 EYE IRRITATION - Category 2A
H360 TOXIC TO REPRODUCTION - Category 1B
H335 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
H373 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
Section 2. Hazards identification

2.2 GHS label elements

Signal word : Danger
Hazard statements :
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.
H360 - May damage fertility or the unborn child.
H373 - May cause damage to organs through prolonged or repeated exposure. (kidneys)

Precautionary statements
Prevention :
P201 - Obtain special instructions before use.
P280 - Wear protective gloves. Wear protective clothing. Wear eye or face protection.
P260 - Do not breathe vapor.
Response :
P308 + P313 - IF exposed or concerned: Get medical advice or attention.
Storage :
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
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

Substance/mixture : Mixture

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propylene carbonate</td>
<td>( \geq 10 - \leq 25 )</td>
<td>108-32-7</td>
</tr>
<tr>
<td>N-Methyl-2-pyrrolidone</td>
<td>( \leq 10 )</td>
<td>872-50-4</td>
</tr>
<tr>
<td>2,2' -oxybisethanol</td>
<td>( \leq 3 )</td>
<td>111-46-6</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.

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.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Date of issue : 07/29/2020
Section 4. First aid measures

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. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion: 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. 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 respiratory irritation.
Skin contact: Causes skin irritation.
Ingestion: No known significant effects or critical hazards.

Over-exposure signs/symptoms:

Eye contact: Adverse symptoms may include the following:
- pain or irritation
- watering
- redness

Inhalation: Adverse symptoms may include the following:
- respiratory tract irritation
- coughing
- reduced fetal weight
- increase in fetal deaths
- skeletal malformations

Skin contact: Adverse symptoms may include the following:
- irritation
- redness
- 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: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments: No specific treatment.

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)

Date of issue: 07/29/2020
Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media: None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical: In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products: Decomposition products may include the following materials:
- Carbon dioxide
- Carbon monoxide
- Nitrogen oxides

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.

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. 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

Methods for cleaning up: 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: 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. 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.
Section 7. Handling and storage

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 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. 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 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>Propylene carbonate</td>
<td>None.</td>
</tr>
<tr>
<td>N-Methyl-2-pyrrolidone</td>
<td><strong>AIHA WEEL (United States, 7/2018).</strong> Absorbed through skin.</td>
</tr>
<tr>
<td>2,2’-oxybisethanol</td>
<td><strong>AIHA WEEL (United States, 7/2018).</strong> TWA: 10 ppm 8 hours.</td>
</tr>
</tbody>
</table>

8.2 Exposure controls

Appropriate engineering controls: Use only with adequate ventilation. 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.

Date of issue: 07/29/2020
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**: 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

9.1 Information on basic physical and chemical properties

**Appearance**

- **Physical state**: Liquid. [Clear.]
- **Color**: Not available.
- **Odor**: Odorless.
- **Odor threshold**: Not available.
- **pH**: 5.1
- **Melting point**: Not available.
- **Boiling point**: Not available.
- **Flash point**: Not available.
- **Evaporation rate**: Not available.
- **Flammability (solid, gas)**: Not applicable.
- **Lower and upper explosive (flammable) limits**: Not available.
- **Vapor pressure**: Not available.
- **Vapor density**: Not available.
- **Relative density**: Not available.
- **Solubility**: Soluble in the following materials: cold water and hot water.
- **Partition coefficient: n-octanol/water**: Not available.
- **Auto-ignition temperature**: Not available.
- **Decomposition temperature**: Not available.
- **Viscosity**: Not available.
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: No specific data.

10.5 Incompatible materials: May react or be incompatible with 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>Propylene carbonate</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>&gt;5000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>N-Methyl-2-pyrrolidone</td>
<td>LC50 Inhalation Dusts and mists</td>
<td>Rat, Male, Female</td>
<td>&gt;5.1 mg/l</td>
<td>4 hours</td>
</tr>
<tr>
<td>2,2' -oxybisethanol</td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>8 g/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rabbit</td>
<td>3914 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>11890 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rabbit</td>
<td>12000 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

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>Propylene carbonate</td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>60 mg</td>
<td>-</td>
</tr>
<tr>
<td>N-Methyl-2-pyrrolidone</td>
<td>Skin - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>500 mg</td>
<td>-</td>
</tr>
<tr>
<td>2,2' -oxybisethanol</td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>100 mg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>50 mg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>500 mg</td>
<td>-</td>
</tr>
</tbody>
</table>

Sensitization

Not available.

Mutagenicity

Conclusion/Summary: Not available.

Carcinogenicity

Conclusion/Summary: Not available.

Reproductive toxicity

Conclusion/Summary: Not available.

Teratogenicity

Conclusion/Summary: Not available.

Specific target organ toxicity (single exposure)
Section 11. Toxicological information

Information on the likely routes of exposure

**Inhalation:**
- May cause respiratory irritation.
- No known significant effects or critical hazards.

**Ingestion**

**Skin contact**
- Irritation
- Redness
- Reduced fetal weight
- Increase in fetal deaths
- Skeletal malformations

**Eye contact**
- Pain or irritation
- Watering
- Redness

**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>Propylene carbonate</td>
<td>Category 3</td>
<td>-</td>
<td>Respiratory tract irritation</td>
</tr>
<tr>
<td>N-Methyl-2-pyrrolidone</td>
<td>Category 3</td>
<td>-</td>
<td>Respiratory tract irritation</td>
</tr>
<tr>
<td>2,2’-oxybisethanol</td>
<td>Category 2</td>
<td>oral</td>
<td>Kidneys</td>
</tr>
</tbody>
</table>

Aspiration hazard

Not available.

Information on the likely routes of exposure

Potential acute health effects

**Eye contact**
- Causes serious eye irritation.

**Inhalation**
- May cause respiratory irritation.

**Skin contact**
- Causes skin irritation.

**Ingestion**
- No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact**
- Adverse symptoms may include the following:
  - Respiratory tract irritation
  - Coughing
  - Reduced fetal weight
  - Increase in fetal deaths
  - Skeletal malformations

**Inhalation**
- Adverse symptoms may include the following:
  - Respiratory tract irritation
  - Coughing
  - Reduced fetal weight
  - Increase in fetal deaths
  - Skeletal malformations

**Skin contact**
- Adverse symptoms may include the following:
  - Irritation
  - Redness
  - 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

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**

Date of issue: 07/29/2020
Section 11. Toxicological information

Potential immediate effects: Not available.
Potential delayed effects: Not available.
Potential chronic health effects

General: May cause damage to organs through prolonged or repeated exposure.
Carcinogenicity: No known significant effects or critical hazards.
Mutagenicity: No known significant effects or critical hazards.
Teratogenicity: May damage the unborn child.
Developmental effects: No known significant effects or critical hazards.
Fertility effects: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

<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>TMB-Plus Substrate-Chromogen</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N-Methyl-2-pyrrolidone</td>
<td>12457.7</td>
<td></td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2,2'-oxybisethanol</td>
<td>3914</td>
<td>8000</td>
<td>11890</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

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>Propylene carbonate</td>
<td>Acute EC50 &gt;1000 mg/l Fresh water</td>
<td>Daphnia - Daphnia magna</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 &gt;1000 mg/l Fresh water</td>
<td>Fish - Cyprinus carpio</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute NOEC &gt;1000 mg/l Fresh water</td>
<td>Fish - Cyprinus carpio</td>
<td>96 hours</td>
</tr>
<tr>
<td>N-Methyl-2-pyrrolidone</td>
<td>Acute LC50 1.23 ppm Fresh water</td>
<td>Daphnia - Daphnia magna</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 832 ppm Fresh water</td>
<td>Fish - Lepomis macrochirus</td>
<td>96 hours</td>
</tr>
<tr>
<td>2,2'-oxybisethanol</td>
<td>Acute LC50 75200000 µg/l Fresh water</td>
<td>Fish - Pimephales promelas</td>
<td>96 hours</td>
</tr>
</tbody>
</table>

12.2 Persistence and degradability

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Result</th>
<th>Dose</th>
<th>Inoculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propylene carbonate</td>
<td>OECD 301B Ready Biodegradability - CO₂ Evolution Test</td>
<td>87.7 % - Readily - 29 days</td>
<td>-</td>
<td>Activated sludge</td>
</tr>
</tbody>
</table>

12.3 Bioaccumulative potential
Section 12. Ecological information

<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>Propylene carbonate</td>
<td>-0.41</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td>N-Methyl-2-pyrrolidone</td>
<td>-0.46</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td>2,2’-oxybisethanol</td>
<td>-1.98</td>
<td>100</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. 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

DOT / TDG / Mexico / IMDG / IATA: Not regulated.

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: 07/29/2020
Section 15. Regulatory information

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

U.S. Federal regulations

TSCA 5(a)2 proposed significant new use rules: N-Methyl-2-pyrrolidone
TSCA 8(a) CDR Exempt/Partial exemption: Not determined
TSCA 12(b) one-time export: N-Methyl-2-pyrrolidone

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

<table>
<thead>
<tr>
<th>Name</th>
<th>%</th>
<th>EHS</th>
<th>SARA 302 TPQ (lbs)</th>
<th>SARA 304 RQ (gallons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>hydrogen peroxide</td>
<td>&lt;1</td>
<td>Yes.</td>
<td>1000</td>
<td>106.1</td>
</tr>
<tr>
<td><strong>SARA 304 RQ</strong></td>
<td></td>
<td></td>
<td>149253.7 lbs / 67761.2 kg</td>
<td></td>
</tr>
</tbody>
</table>

SARA 311/312

Classification
SKIN IRRITATION - Category 2
EYE IRRITATION - Category 2A
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

Composition/information on ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>%</th>
<th>Classification</th>
</tr>
</thead>
</table>
| Propylene carbonate         | ≥10 - ≤25 | SKIN IRRITATION - Category 2
EYE IRRITATION - Category 2A
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
FLAMMABLE LIQUIDS - Category 4
SKIN IRRITATION - Category 2
EYE IRRITATION - Category 2A
TOXIC TO REPRODUCTION - Category 1B
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
ACUTE TOXICITY (oral) - Category 4
EYE IRRITATION - Category 2B
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

<table>
<thead>
<tr>
<th>Name</th>
<th>%</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-Methyl-2-pyrrolidone</td>
<td>≤10</td>
<td></td>
</tr>
<tr>
<td>2,2’-oxybisethanol</td>
<td>≤3</td>
<td></td>
</tr>
</tbody>
</table>

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>N-Methyl-2-pyrrolidone</td>
<td>872-50-4</td>
</tr>
<tr>
<td>Supplier notification</td>
<td>N-Methyl-2-pyrrolidone</td>
<td>872-50-4</td>
</tr>
</tbody>
</table>

Date of issue: 07/29/2020
Section 15. Regulatory information

The following components are listed: 1-METHYL-2-PYRROLIDONE

Massachusetts: The following components are listed: 1-METHYL-2-PYRROLIDONE;
New York: None of the components are listed.
New Jersey: The following components are listed: 1-METHYL-2-PYRROLIDONE;
Pennsylvania: The following components are listed: 2-PYRROLIDINONE, 1-METHYL-
California Prop. 65

⚠️ WARNING: This product can expose you to N-methylpyrrolidone, 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>N-methylpyrrolidone</td>
<td>-</td>
<td>Yes.</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.

UNCE Aarhus Protocol on POPs and Heavy Metals
Not listed.

Inventory list

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

Date of issue: 07/29/2020
Section 16. Other information

History
Date of issue : 07/29/2020
Date of previous issue : 03/22/2020
Version : 3.1
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

Procedure used to derive the classification

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>SKIN IRRITATION - Category 2</td>
<td>Calculation method</td>
</tr>
<tr>
<td>EYE IRRITATION - Category 2A</td>
<td>Calculation method</td>
</tr>
<tr>
<td>TOXIC TO REPRODUCTION - Category 1B</td>
<td>Calculation method</td>
</tr>
<tr>
<td>SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3</td>
<td>Calculation method</td>
</tr>
<tr>
<td>SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

Indicates information that has changed from previously issued version.

Notice to reader

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