Section 1. Identification

This product is considered an article. This Safety Data Sheet is written based on the encapsulated substance or mixture in this article.

Product identifier: SepTech ST60-10 Si Dynamax 250 x 41.4mm LC Column, Part Number A8061250DM414S

Part no.: A8061250DM414S

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

Identified uses: Analytical chemistry. A8061250DM414S SepTech ST60-10 Si Dynamax 250 x 41.4mm, 202 ml Solvent.

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

Emergency telephone number (with hours of operation): CHEMTREC®: 1-800-424-9300

Section 2. Hazard identification

This article, when used under reasonable conditions and in accordance with the directions for use, should not present a health hazard. The substance or mixture is encapsulated in the article. Only if released due to use or processing of the article in a manner not in accordance with the product’s directions for use it may present potential health and safety hazards.

Classification of the substance or mixture

- H225 FLAMMABLE LIQUIDS - Category 2
- H315 SKIN IRRITATION - Category 2
- H319 EYE IRRITATION - Category 2A
- H335 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
- H336 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
- H304 ASPIRATION HAZARD - Category 1
- H400 AQUATIC HAZARD (ACUTE) - Category 1
- H410 AQUATIC HAZARD (LONG-TERM) - Category 1

GHS label elements

Hazard pictograms: 

Signal word: Danger
Section 2. Hazard identification

**Hazard statements**
- H225 - Highly flammable liquid and vapor.
- H304 - May be fatal if swallowed and enters airways.
- H315 - Causes skin irritation.
- H319 - Causes serious eye irritation.
- H335 - May cause respiratory irritation.
- H336 - May cause drowsiness or dizziness.
- H410 - Very toxic to aquatic life with long lasting effects.

**Precautionary statements**

**Prevention**
- P280 - Wear protective gloves. Wear eye or face protection.
- P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P273 - Avoid release to the environment.
- P264 - Wash thoroughly after handling.

**Response**
- P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell.
- P301 + P310, P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting.
- P362 + P364 - Take off contaminated clothing and wash it before reuse.
- P302 + P352 - IF ON SKIN: Wash with plenty of water.
- 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 + 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.

Section 3. Composition/information on ingredients

**Substance/mixture**
- Mixture  (encapsulated in article)

**Ingredients**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Synonyms</th>
<th>% (w/w)</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,2,4-trimethylpentane</td>
<td>Isooctane</td>
<td>≥30 - ≤60</td>
<td>540-84-1</td>
</tr>
<tr>
<td>Propan-2-ol</td>
<td>Isopropanol</td>
<td>≥1 - ≤5</td>
<td>67-63-0</td>
</tr>
</tbody>
</table>

Contains: Organosilane bonded silica gel

Note: To the best of our knowledge, the acute and chronic toxicological properties of bonded silica gels have not been investigated. This product contains synthetic amorphous silica, and should not be confused with crystalline silica such as quartz, cristobalite, or tridymite, or with diatomaceous earth or other naturally occurring forms of amorphous silica that frequently contain crystalline forms of silica.

Ranges if listed above for hazardous ingredient(s) are prescribed ranges. The actual concentration(s) or actual concentration range(s) are being withheld as a trade secret.

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

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.

**Skin contact**: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**Ingestion**: Get medical attention immediately. Call a poison center or physician. 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. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. 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.

Most important symptoms/effects, acute and delayed

**Potential acute health effects**

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

**Inhalation**: Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

**Skin contact**: Causes skin irritation.

**Ingestion**: Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

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, nausea or vomiting, headache, dizziness/fatigue, dizziness/vertigo, unconsciousness.

**Skin contact**: Adverse symptoms may include the following: irritation, redness.

**Ingestion**: Adverse symptoms may include the following: nausea or vomiting.

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

Date of issue/Date of revision: 10/20/2022  Date of previous issue: 08/20/2019  Version: 4
Section 4. First-aid measures

- **Notes to physician**: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

- **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.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

- **Extinguishing media**
  - Suitable extinguishing media: Use dry chemical, \( \text{CO}_2 \), water spray (fog) or foam.
  - Unsuitable extinguishing media: Do not use water jet.

- **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. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

- **Hazardous thermal decomposition products**
  - Decomposition products may include the following materials:
    - carbon dioxide
    - carbon monoxide
    - metal oxide/oxides

- **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

- **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".

- **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). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

Methods and materials for containment and cleaning up

Date of issue/Date of revision : 10/20/2022  Date of previous issue : 08/20/2019  Version : 4
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

Precautions for safe handling

Protective measures: Put on appropriate personal protective equipment (see Section 8). Do not swallow. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Avoid release to the environment. 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.

Conditions for safe storage, including any incompatibilities: 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.

Section 8. Exposure controls/personal protection

Since the hazardous ingredient in this article is encapsulated, the risk of exposure by inhalation, ingestion, skin contact and eyes contact is minimum.

Control parameters

Occupational exposure limits

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,2,4-trimethylpentane</td>
<td>CA Alberta Provincial (Canada, 6/2018). [Octane]</td>
</tr>
<tr>
<td></td>
<td>8 hrs OEL: 300 ppm 8 hours.</td>
</tr>
<tr>
<td></td>
<td>8 hrs OEL: 1400 mg/m³ 8 hours.</td>
</tr>
<tr>
<td></td>
<td>CA British Columbia Provincial (Canada, 6/2021). [Octane, all isomers]</td>
</tr>
<tr>
<td></td>
<td>TWA: 300 ppm 8 hours.</td>
</tr>
<tr>
<td></td>
<td>CA Ontario Provincial (Canada, 6/2019). [Octane, all isomers]</td>
</tr>
<tr>
<td></td>
<td>TWA: 300 ppm 8 hours.</td>
</tr>
<tr>
<td></td>
<td>CA Saskatchewan Provincial (Canada, 7/2013). [Octane]</td>
</tr>
<tr>
<td></td>
<td>STEL: 375 ppm 15 minutes.</td>
</tr>
</tbody>
</table>
### Section 8. Exposure controls/personal protection

<table>
<thead>
<tr>
<th>Chemical</th>
<th>TWA: 300 ppm 8 hours.</th>
<th>CA Alberta Provincial (Canada, 6/2018). 15 min OEL: 984 mg/m³ 15 minutes. 8 hrs OEL: 200 ppm 8 hours. 15 min OEL: 400 ppm 15 minutes. 8 hrs OEL: 492 mg/m³ 8 hours.</th>
</tr>
</thead>
</table>

#### Biological exposure indices

None known.

#### 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

**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.
Section 8. Exposure controls/personal protection

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. 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.

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 and safety characteristics

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

**Appearance**

- **Physical state**: Solid. (containing flammable liquid)
- **Color**: Not available.
- **Odor**: Not available.
- **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: -18 to 23°C (-0.4 to 73.4°F)

**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>Propan-2-ol</td>
<td>33</td>
<td>4.4</td>
</tr>
<tr>
<td>2,2,4-trimethylpentane</td>
<td>21</td>
<td>2.8</td>
</tr>
</tbody>
</table>

**Relative vapor density**: Not available.

**Relative density**: Not available.

**Solubility(ies)**

- **Media**: Result
  - Mobile phase: Soluble
  - Stationary phase: Insoluble

**Partition coefficient: n-octanol/water**: 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>2,2,4-trimethylpentane</td>
<td>418</td>
<td>784.4</td>
<td></td>
</tr>
<tr>
<td>Propan-2-ol</td>
<td>456</td>
<td>852.8</td>
<td></td>
</tr>
</tbody>
</table>

**Decomposition temperature**: Not available.

Date of issue/Date of revision: 10/20/2022

Date of previous issue: 08/20/2019

Version: 4
Section 9. Physical and chemical properties and safety characteristics

Viscosity: Not available.

Particle characteristics
Median particle size: Not applicable.

Section 10. Stability and reactivity

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

Chemical stability: The product is stable.

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

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.

Incompatible materials: Reactive or incompatible with the following materials: oxidizing materials. Incompatible with hydrogen fluoride.

Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Score</th>
<th>Dose</th>
<th>Exposure</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,2,4-trimethylpentane</td>
<td>LC50 Inhalation Vapor</td>
<td>Rat - Male, Female</td>
<td></td>
<td>&gt;33.52 mg/l</td>
<td>4 hours</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat - Male, Female</td>
<td></td>
<td>&gt;5000 mg/kg</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Propan-2-ol</td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td></td>
<td>12800 mg/kg</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td></td>
<td>5000 mg/kg</td>
<td>-</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>Propan-2-ol</td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>10 mg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 100 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>

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
Section 11. Toxicological information

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>IARC</th>
<th>NTP</th>
<th>ACGIH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propan-2-ol</td>
<td>3</td>
<td>-</td>
<td>A4</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>2,4-trimethylpentane</td>
<td>Category 3</td>
<td>-</td>
<td>Respiratory tract irritation Narcotic effects</td>
</tr>
<tr>
<td>Propan-2-ol</td>
<td>Category 3</td>
<td>Category 3</td>
<td>Narcotic effects Narcotic effects</td>
</tr>
</tbody>
</table>

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

<table>
<thead>
<tr>
<th>Name</th>
<th>Route of exposure</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>SepTech ST60-10 Si Dynamax 250 x 41.4mm LC Column, Part Number A8061250DM414S 2,2,4-trimethylpentane</td>
<td>ASPIRATION HAZARD - Category 1</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
</tbody>
</table>

Information on the likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

Skin contact : Causes skin irritation.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

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

Inhalation : Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness

Skin contact : Adverse symptoms may include the following: irritation redness

Ingestion : Adverse symptoms may include the following: nausea or vomiting

Date of issue/Date of revision : 10/20/2022  Date of previous issue : 08/20/2019  Version : 4
Section 11. Toxicological information

**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**
- General: No known significant effects or critical hazards.
- Carcinogenicity: No known significant effects or critical hazards.
- Mutagenicity: No known significant effects or critical hazards.
- Reproductive toxicity: 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>SepTech ST60-10 Si Dynamax 250 x 41.4mm LC Column, Part Number A8061250DM414S Propan-2-ol</td>
<td>500000</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Propan-2-ol</td>
<td>5000</td>
<td>12800</td>
<td>N/A</td>
<td>72.2</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Section 12. Ecological information

**Toxicity**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propan-2-ol</td>
<td>Acute EC50 7550 mg/l Fresh water</td>
<td>Daphnia - Daphnia magna - Neonate Crustaceans - Crangon crangon Fish - Rasbora heteromorpha</td>
<td>48 hours</td>
</tr>
<tr>
<td>Propan-2-ol</td>
<td>Acute LC50 1400000 µg/l Marine water Acute LC50 4200 mg/l Fresh water</td>
<td>48 hours 96 hours</td>
<td></td>
</tr>
</tbody>
</table>

**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>2,2,4-trimethylpentane Propan-2-ol</td>
<td>-</td>
<td>-</td>
<td>Inherent Readily</td>
</tr>
</tbody>
</table>

**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>2,2,4-trimethylpentane Propan-2-ol</td>
<td>4.08 0.05</td>
<td>231</td>
<td>low low</td>
</tr>
</tbody>
</table>

**Mobility in soil**

Date of issue/Date of revision: 10/20/2022  Date of previous issue: 08/20/2019  Version: 4 10/13
Section 12. Ecological information

Soil/water partition coefficient ($K_{OC}$) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

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.

Section 14. Transport information

This Safety Data Sheet is written based on the encapsulated substance or mixture in this article. Since the hazardous ingredient is encapsulated, the risk of exposure by inhalation, ingestion, skin contact and eyes contact is minimum.

<table>
<thead>
<tr>
<th>UN number</th>
<th>TDG Classification</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN3175</td>
<td>SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S. (2,2,4-trimethylpentane, Propan-2-ol)</td>
<td>SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S. (2,2,4-trimethylpentane, Propan-2-ol)</td>
<td>Solids containing flammable liquid, n.o.s. (2,2,4-trimethylpentane, Propan-2-ol)</td>
</tr>
</tbody>
</table>

Transport hazard class(es) : 4.1

Packing group : II

Environmental hazards : Yes. The environmentally hazardous substance mark is not required.

Proof of classification statement : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.20-2.22 (Class 4), 2.7 (Marine pollutant mark).

Additional information : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.20-2.22 (Class 4), 2.7 (Marine pollutant mark). The marine pollutant mark is not required when transported by road or rail.

TDG Classification : Explosive Limit and Limited Quantity Index 1  
Passenger Carrying Road or Rail Index 15  
Special provisions 16, 56

Date of issue/Date of revision : 10/20/2022  
Date of previous issue : 08/20/2019  
Version : 4  
11/13
Section 14. Transport information

IMDG : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. Emergency schedules F-A, S-I. Special provisions 216, 274


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.

Quantity limitation


Section 15. Regulatory information

Canadian lists
Canadian NPRI : The following components are listed: octane (all isomers); isopropyl alcohol
CEPA Toxic substances : None of the components are listed.

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.
Eurasian Economic Union : Russian Federation inventory: All components are listed or exempted.
Japan : Japan inventory (CSCL): All components are listed or exempted. Japan inventory (ISHL): All components are listed or exempted.
New Zealand : All components are listed or exempted.
Philippines : Not determined.
Republic of Korea : All components are listed or exempted.
Taiwan : All components are listed or exempted.
Thailand : Not determined.
Turkey : All components are listed or exempted.
United States : All components are active or exempted.
Viet Nam : Not determined.
## Section 16. Other information

### History
- **Date of issue/Date of revision**: 10/20/2022
- **Date of previous issue**: 08/20/2019
- **Version**: 4

### Key to abbreviations
- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- HPR = Hazardous Products Regulations
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- 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>FLAMMABLE LIQUIDS - Category 2</td>
<td>On basis of test data</td>
</tr>
<tr>
<td>SKIN IRITATION - Category 2</td>
<td>Calculation method</td>
</tr>
<tr>
<td>EYE IRRITATION - Category 2A</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 (SINGLE EXPOSURE) (Narcotic effects) - Category 3</td>
<td>Calculation method</td>
</tr>
<tr>
<td>ASPIRATION HAZARD - Category 1</td>
<td>Expert judgment</td>
</tr>
<tr>
<td>AQUATIC HAZARD (ACUTE) - Category 1</td>
<td>Calculation method</td>
</tr>
<tr>
<td>AQUATIC HAZARD (LONG-TERM) - Category 1</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

* Indicates information that has changed from previously issued version.

### Notice to reader

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