SAFETY DATA SHEET
Gas Filter FID Kit 1/8 in, 5pk, Part Number CP736530-TR5

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 : Gas Filter FID Kit 1/8 in, 5pk, Part Number CP736530-TR5
Part no. (chemical kit) : CP736530-TR5
Part no. : Gas Clean Filter Hydrocarbon CP17972
Gas Clean Filter Oxygen CP17970
Gas Clean Filter Moisture CP17971

Material uses : Analytical chemistry.
Gas Clean Filter Hydrocarbon 200 ml
Gas Clean Filter Oxygen 200 ml
Gas Clean Filter Moisture 200 ml

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
Gas Clean Filter Hydrocarbon

COMBUSTIBLE DUSTS - Category 1

Gas Clean Filter Oxygen
H332 ACUTE TOXICITY (inhalation) - Category 4
H317 SKIN SENSITIZATION - Category 1
H350 CARCINOGENICITY - Category 1
H373 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
H400 AQUATIC HAZARD (ACUTE) - Category 1
H411 AQUATIC HAZARD (LONG-TERM) - Category 2

Gas Clean Filter Moisture
H350 CARCINOGENICITY - Category 1
H372 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

GHS label elements

Date of issue/Date of revision : 11/09/2021 Date of previous issue : No previous validation Version : 1
Section 2. Hazard identification

**Signal word**
- Gas Clean Filter Hydrocarbon: Warning
- Gas Clean Filter Oxygen: Danger
- Gas Clean Filter Moisture: Danger

**Hazard statements**
- Gas Clean Filter Hydrocarbon: May form combustible dust concentrations in air.
  - H317 - May cause an allergic skin reaction.
  - H332 - Harmful if inhaled.
  - H350 - May cause cancer.
  - H373 - May cause damage to organs through prolonged or repeated exposure. (brain)
  - H400 - Very toxic to aquatic life.
  - H411 - Toxic to aquatic life with long lasting effects.
- Gas Clean Filter Oxygen: H350 - May cause cancer.
- Gas Clean Filter Moisture: H350 - May cause cancer.
  - H372 - Causes damage to organs through prolonged or repeated exposure. (lungs)

**Precautionary statements**

**Prevention**
- Gas Clean Filter Hydrocarbon: Not applicable.
- Gas Clean Filter Oxygen: P201 - Obtain special instructions before use.
  - P280 - Wear protective gloves, protective clothing and eye or face protection.
  - P273 - Avoid release to the environment.
  - P260 - Do not breathe dust.
- Gas Clean Filter Moisture: P201 - Obtain special instructions before use.
  - P280 - Wear protective gloves, protective clothing and eye or face protection.
  - P260 - Do not breathe dust.
  - P270 - Do not eat, drink or smoke when using this product.

**Response**
- Gas Clean Filter Hydrocarbon: Not applicable.
- Gas Clean Filter Oxygen: P391 - Collect spillage.
  - P308 + P313 - IF exposed or concerned: Get medical advice or attention.
  - P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell.
  - P362 + P364 - Take off contaminated clothing and wash it before reuse.
  - P302 + P352 - IF ON SKIN: Wash with plenty of water.
  - P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention.
- Gas Clean Filter Moisture: P308 + P313 - IF exposed or concerned: Get medical advice or attention.
### Section 2. Hazard identification

**Storage**

- Gas Clean Filter Hydrocarbon: Not applicable.
- Gas Clean Filter Oxygen: Not applicable.
- Gas Clean Filter Moisture: Not applicable.

**Disposal**

- Gas Clean Filter Hydrocarbon: Not applicable.
- Gas Clean Filter Oxygen: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Gas Clean Filter Moisture: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Supplemental label elements**

- Gas Clean Filter Hydrocarbon: Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent dust accumulation.
- Gas Clean Filter Oxygen: None known.
- Gas Clean Filter Moisture: None known.

**Other hazards which do not result in classification**

- Gas Clean Filter Hydrocarbon: None known.
- Gas Clean Filter Oxygen: None known.
- Gas Clean Filter Moisture: None known.

### Section 3. Composition/information on ingredients

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.

<table>
<thead>
<tr>
<th>Substance/mixture</th>
<th>Ingredient name</th>
<th>% (w/w)</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas Clean Filter Hydrocarbon</td>
<td>carbon</td>
<td>80 - 100</td>
<td>7440-44-0</td>
</tr>
<tr>
<td>Gas Clean Filter Oxygen</td>
<td>Copper oxide, Activated</td>
<td>5 - 10</td>
<td>1317-38-0</td>
</tr>
<tr>
<td></td>
<td>Manganese dioxide</td>
<td>5 - 10</td>
<td>1313-13-9</td>
</tr>
<tr>
<td></td>
<td>nickel monoxide</td>
<td>0.1 - 1</td>
<td>1313-99-1</td>
</tr>
<tr>
<td>Gas Clean Filter Moisture</td>
<td>crystalline silica, respirable powder</td>
<td>5 - 10</td>
<td>14808-60-7</td>
</tr>
<tr>
<td></td>
<td>cristobalite</td>
<td>5 - 10</td>
<td>14464-46-1</td>
</tr>
</tbody>
</table>

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

### Description of necessary first aid measures

**Eye contact**
- **Gas Clean Filter Hydrocarbon**: 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 irritation occurs.

- **Gas Clean Filter Oxygen**: 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.

- **Gas Clean Filter Moisture**: 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**
- **Gas Clean Filter Hydrocarbon**: 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 adverse health effects persist or are severe. 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.

- **Gas Clean Filter Oxygen**: 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.

- **Gas Clean Filter Moisture**: 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 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**
- **Gas Clean Filter Hydrocarbon**: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

- **Gas Clean Filter Oxygen**: Wash with plenty of soap and 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. In the event of any complaints or symptoms, avoid further...
Section 4. First-aid measures

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

Gas Clean Filter Moisture
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: Gas Clean Filter

Hydrocarbon
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 adverse health effects persist or are severe. 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.

Gas Clean Filter Oxygen
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. 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.

Gas Clean Filter Moisture
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. 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: Gas Clean Filter Hydrocarbon
Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

Gas Clean Filter Oxygen
No known significant effects or critical hazards.

Gas Clean Filter Moisture
No known significant effects or critical hazards.
## Section 4. First-aid measures

<table>
<thead>
<tr>
<th>Inhalation</th>
<th>Gas Clean Filter Hydrocarbon</th>
<th>Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gas Clean Filter Oxygen</td>
<td>Harmful if inhaled.</td>
</tr>
<tr>
<td></td>
<td>Gas Clean Filter Moisture</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Skin contact</th>
<th>Gas Clean Filter Hydrocarbon</th>
<th>No known significant effects or critical hazards.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gas Clean Filter Oxygen</td>
<td>May cause an allergic skin reaction.</td>
</tr>
<tr>
<td></td>
<td>Gas Clean Filter Moisture</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Ingestion</th>
<th>Gas Clean Filter Hydrocarbon</th>
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<tr>
<td></td>
<td>Gas Clean Filter Oxygen</td>
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<tr>
<td></td>
<td>Gas Clean Filter Moisture</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

### Over-exposure signs/symptoms

<table>
<thead>
<tr>
<th>Eye contact</th>
<th>Gas Clean Filter Hydrocarbon</th>
<th>Adverse symptoms may include the following:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>irritation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>redness</td>
</tr>
<tr>
<td></td>
<td>Gas Clean Filter Oxygen</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>Gas Clean Filter Moisture</td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

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<tr>
<th>Inhalation</th>
<th>Gas Clean Filter Hydrocarbon</th>
<th>Adverse symptoms may include the following:</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>respiratory tract irritation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>coughing</td>
</tr>
<tr>
<td></td>
<td>Gas Clean Filter Oxygen</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>Gas Clean Filter Moisture</td>
<td>No specific data.</td>
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</tbody>
</table>

<table>
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<tr>
<th>Skin contact</th>
<th>Gas Clean Filter Hydrocarbon</th>
<th>No specific data.</th>
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<tr>
<td></td>
<td>Gas Clean Filter Moisture</td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Notes to physician</th>
<th>Gas Clean Filter Hydrocarbon</th>
<th>Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gas Clean Filter Oxygen</td>
<td>Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.</td>
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<table>
<thead>
<tr>
<th>Specific treatments</th>
<th>Gas Clean Filter Hydrocarbon</th>
<th>No specific treatment.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gas Clean Filter Oxygen</td>
<td>No specific treatment.</td>
</tr>
<tr>
<td></td>
<td>Gas Clean Filter Moisture</td>
<td>No specific treatment.</td>
</tr>
</tbody>
</table>
Section 4. First-aid measures

**Protection of first-aiders**

- **Gas Clean Filter Hydrocarbon**: No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
- **Gas Clean Filter Oxygen**: 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.
- **Gas Clean Filter Moisture**: 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

**Extinguishing media**

**Suitable extinguishing media**
- **Gas Clean Filter Hydrocarbon**: Use dry chemical powder.
- **Gas Clean Filter Oxygen**: Use an extinguishing agent suitable for the surrounding fire.
- **Gas Clean Filter Moisture**: Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media**
- **Gas Clean Filter Hydrocarbon**: Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture.
- **Gas Clean Filter Oxygen**: None known.
- **Gas Clean Filter Moisture**: None known.

**Specific hazards arising from the chemical**
- **Gas Clean Filter Hydrocarbon**: May form explosible dust-air mixture if dispersed.
- **Gas Clean Filter Oxygen**: This material is very toxic to aquatic life. This material is 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.
- **Gas Clean Filter Moisture**: No specific fire or explosion hazard.

**Hazardous thermal decomposition products**
- **Gas Clean Filter Hydrocarbon**: Decomposition products may include the following materials: carbon dioxide, carbon monoxide.
- **Gas Clean Filter Oxygen**: Decomposition products may include the following materials: metal oxide/oxides.
- **Gas Clean Filter Moisture**: Decomposition products may include the following materials: metal oxide/oxides.
Section 5. Fire-fighting measures

**Special protective actions for fire-fighters**

- **Gas Clean Filter Hydrocarbon**
  - 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.

- **Gas Clean Filter Oxygen**
  - 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.

- **Gas Clean Filter Moisture**
  - 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**

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

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

- **Gas Clean Filter Moisture**
  - 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**

- **Gas Clean Filter Hydrocarbon**
  - 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 dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

- **Gas Clean Filter Oxygen**
  - 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. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

- **Gas Clean Filter Moisture**
  - 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. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
Section 6. Accidental release measures

**For emergency responders**: Gas Clean Filter Hydrocarbon
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".

**Gas Clean Filter Oxygen**: 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".

**Gas Clean Filter Moisture**: 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**: Gas Clean Filter Hydrocarbon
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).

**Gas Clean Filter Oxygen**: 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.

**Gas Clean Filter Moisture**: 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).

**Methods and materials for containment and cleaning up**

**Methods for cleaning up**: Gas Clean Filter Hydrocarbon
Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

**Gas Clean Filter Oxygen**: Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

**Gas Clean Filter Moisture**: Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

**Precautions for safe handling**
### Section 7. Handling and storage

<table>
<thead>
<tr>
<th>Protective measures</th>
<th>Gas Filter Hydrocarbon</th>
<th>Gas Clean Filter Oxygen</th>
<th>Gas Clean Filter Moisture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. 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. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.</td>
<td>Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid release to the environment. 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.</td>
<td>Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. 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.</td>
<td></td>
</tr>
</tbody>
</table>

### Advice on general occupational hygiene

<table>
<thead>
<tr>
<th>Gas Clean Filter Hydrocarbon</th>
<th>Gas Clean Filter Oxygen</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
<td>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.</td>
</tr>
</tbody>
</table>
Section 7. Handling and storage

Gas Clean Filter Moisture
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

Gas Clean Filter Hydrocarbon
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. 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.

Gas Clean Filter Oxygen
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.

Gas Clean Filter Moisture
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.

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
### Section 8. Exposure controls/personal protection

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas Clean Filter Hydrocarbon</td>
<td>CA Quebec Provincial (Canada, 7/2019). TWAEV: 2 mg/m³ 8 hours. Form: Respirable dust.</td>
</tr>
<tr>
<td>carbon</td>
<td></td>
</tr>
<tr>
<td>Gas Clean Filter Oxygen</td>
<td>CA British Columbia Provincial (Canada, 1/2021). TWA: 0.02 mg/m³, (as Mn) 8 hours. Form: Respirable</td>
</tr>
<tr>
<td>Manganese dioxide</td>
<td>CA Quebec Provincial (Canada, 7/2019). TWAEV: 0.2 mg/m³, (as Mn) 8 hours. Form: Total dust.</td>
</tr>
<tr>
<td>Nickel monoxide</td>
<td>CA Alberta Provincial (Canada, 6/2018). 8 hrs OEL: 0.2 mg/m³, (as Mn) 8 hours.</td>
</tr>
<tr>
<td>CA Ontario Provincial (Canada, 6/2019). TWA: 0.2 mg/m³, (as Mn) 8 hours.</td>
<td></td>
</tr>
<tr>
<td>CA Saskatchewan Provincial (Canada, 7/2013). STEL: 0.6 mg/m³, (measured as Mn) 15 minutes. TWA: 0.2 mg/m³, (measured as Mn) 8 hours.</td>
<td></td>
</tr>
<tr>
<td>CA Saskatchewan Provincial (Canada, 7/2013). STEL: 0.6 mg/m³, (measured as Ni) 15 minutes. Form: Inhalable fraction TWA: 0.2 mg/m³, (measured as Ni) 8 hours. Form: Inhalable fraction</td>
<td></td>
</tr>
<tr>
<td>CA Ontario Provincial (Canada, 6/2019). TWA: 0.2 mg/m³, (as Ni) 8 hours. Form: Inhalable particulate matter.</td>
<td></td>
</tr>
<tr>
<td>CA Alberta Provincial (Canada, 6/2018). 8 hrs OEL: 0.2 mg/m³, (as Ni) 8 hours.</td>
<td></td>
</tr>
<tr>
<td>CA British Columbia Provincial (Canada, 1/2021). TWA: 0.05 mg/m³, (as Ni) 8 hours.</td>
<td></td>
</tr>
<tr>
<td>CA Quebec Provincial (Canada, 7/2019). TWAEV: 1 mg/m³, (as Ni) 8 hours.</td>
<td></td>
</tr>
<tr>
<td>Gas Clean Filter Moisture</td>
<td>CA British Columbia Provincial (Canada, 1/2021). TWA: 0.025 mg/m³ 8 hours. Form: Respirable</td>
</tr>
<tr>
<td>Crystalline silica, respirable powder</td>
<td>CA Quebec Provincial (Canada, 7/2019). TWAEV: 0.1 mg/m³ 8 hours. Form: Respirable dust.</td>
</tr>
<tr>
<td>CA Alberta Provincial (Canada, 6/2018). 8 hrs OEL: 0.025 mg/m³ 8 hours. Form: Respirable particulate</td>
<td></td>
</tr>
<tr>
<td>CA Ontario Provincial (Canada, 6/2019). TWA: 0.1 mg/m³ 8 hours. Form: Respirable particulate matter.</td>
<td></td>
</tr>
<tr>
<td>CA Saskatchewan Provincial (Canada, 7/2013). STEL: 0.6 mg/m³, (measured as Ni) 15 minutes. TWA: 0.2 mg/m³, (measured as Ni) 8 hours. Form: Inhalable fraction</td>
<td></td>
</tr>
</tbody>
</table>

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**Date of previous issue**: No previous validation  
**Version**: 1
### Section 8. Exposure controls/personal protection

<table>
<thead>
<tr>
<th>Substance</th>
<th>OELs and Forms</th>
</tr>
</thead>
</table>
| cristobalite    | **TWA**: 0.05 mg/m³ 8 hours. Form: respirable fraction  
                 **CA British Columbia Provincial (Canada, 1/2021)**.  
                 **TWA**: 0.025 mg/m³ 8 hours. Form: Respirable  
                 **CA Quebec Provincial (Canada, 7/2019)**.  
                 **TWAEV**: 0.05 mg/m³ 8 hours. Form: Respirable dust.  
                 **CA Alberta Provincial (Canada, 6/2018)**.  
                 **8 hrs OEL**: 0.025 mg/m³ 8 hours. Form: Respirable particulate  
                 **CA Ontario Provincial (Canada, 6/2019)**.  
                 **TWA**: 0.05 mg/m³ 8 hours. Form: Respirable particulate matter.  
                 **CA Saskatchewan Provincial (Canada, 7/2013)**.  
                 **TWA**: 0.05 mg/m³ 8 hours. Form: respirable fraction |

### 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.

### 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. Contaminated work clothing should not be allowed out of the workplace. 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: safety glasses with side-shields.

#### 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.

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

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**

<table>
<thead>
<tr>
<th>Property</th>
<th>Gas Clean Filter Hydrocarbon</th>
<th>Gas Clean Filter Oxygen</th>
<th>Gas Clean Filter Moisture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor</td>
<td>None</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

**Odor threshold**

<table>
<thead>
<tr>
<th>Property</th>
<th>Gas Clean Filter Hydrocarbon</th>
<th>Gas Clean Filter Oxygen</th>
<th>Gas Clean Filter Moisture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor threshold</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

**pH**

<table>
<thead>
<tr>
<th>Property</th>
<th>Gas Clean Filter Hydrocarbon</th>
<th>Gas Clean Filter Oxygen</th>
<th>Gas Clean Filter Moisture</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

**Melting point/freezing point**

<table>
<thead>
<tr>
<th>Property</th>
<th>Gas Clean Filter Hydrocarbon</th>
<th>Gas Clean Filter Oxygen</th>
<th>Gas Clean Filter Moisture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting point/freezing point</td>
<td>3652°C (6605.6°F)</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

**Boiling point, initial boiling point, and boiling range**

<table>
<thead>
<tr>
<th>Property</th>
<th>Gas Clean Filter Hydrocarbon</th>
<th>Gas Clean Filter Oxygen</th>
<th>Gas Clean Filter Moisture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling point, initial boiling point, and boiling range</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

**Flash point**

<table>
<thead>
<tr>
<th>Property</th>
<th>Gas Clean Filter Hydrocarbon</th>
<th>Gas Clean Filter Oxygen</th>
<th>Gas Clean Filter Moisture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash point</td>
<td>Not applicable.</td>
<td>Not applicable.</td>
<td>Closed cup: &gt;535°C (&gt;995°F)</td>
</tr>
</tbody>
</table>

**Evaporation rate**

<table>
<thead>
<tr>
<th>Property</th>
<th>Gas Clean Filter Hydrocarbon</th>
<th>Gas Clean Filter Oxygen</th>
<th>Gas Clean Filter Moisture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaporation rate</td>
<td>Not applicable.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

**Flammability**

<table>
<thead>
<tr>
<th>Property</th>
<th>Gas Clean Filter Hydrocarbon</th>
<th>Gas Clean Filter Oxygen</th>
<th>Gas Clean Filter Moisture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability</td>
<td>Not applicable.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

**Lower and upper explosion limit/flammability limit**

<table>
<thead>
<tr>
<th>Property</th>
<th>Gas Clean Filter Hydrocarbon</th>
<th>Gas Clean Filter Oxygen</th>
<th>Gas Clean Filter Moisture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower and upper explosion limit/flammability limit</td>
<td>Not applicable.</td>
<td>Not applicable.</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>
### Section 9. Physical and chemical properties and safety characteristics

<table>
<thead>
<tr>
<th>Property</th>
<th>Gas Clean Filter Hydrocarbon</th>
<th>Gas Clean Filter Oxygen</th>
<th>Gas Clean Filter Moisture</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vapor pressure</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Relative vapor density</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Relative density</strong></td>
<td></td>
<td></td>
<td>1.9 to 2.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Solubility</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Insoluble in the following materials: cold water and hot water.</td>
</tr>
<tr>
<td><strong>Partition coefficient: n-octanol/water</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Auto-ignition temperature</strong></td>
<td></td>
<td></td>
<td>452°C (845.6°F)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Decomposition temperature</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Viscosity</strong></td>
<td></td>
<td></td>
<td>Not applicable.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Particle characteristics</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Median particle size</strong></td>
<td></td>
<td></td>
<td>Not available.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Section 10. Stability and reactivity

<table>
<thead>
<tr>
<th>Property</th>
<th>Gas Clean Filter Hydrocarbon</th>
<th>Gas Clean Filter Oxygen</th>
<th>Gas Clean Filter Moisture</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reactivity</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Chemical stability</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The product is stable.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The product is stable.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The product is stable.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Date of issue/Date of revision: 11/09/2021*
*Date of previous issue: No previous validation*
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Section 10. Stability and reactivity

Possibility of hazardous reactions:

- **Gas Clean Filter Hydrocarbon**
  - Under normal conditions of storage and use, hazardous reactions will not occur.

- **Gas Clean Filter Oxygen**
  - Under normal conditions of storage and use, hazardous reactions will not occur.

- **Gas Clean Filter Moisture**
  - Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid:

- **Gas Clean Filter Hydrocarbon**
  - Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation.

- **Gas Clean Filter Oxygen**
  - No specific data.

- **Gas Clean Filter Moisture**
  - No specific data.

Incompatible materials:

- **Gas Clean Filter Hydrocarbon**
  - Reactive or incompatible with the following materials:
    - oxidizing materials

- **Gas Clean Filter Oxygen**
  - May react or be incompatible with oxidizing materials.

- **Gas Clean Filter Moisture**
  - May react or be incompatible with oxidizing materials.

Hazardous decomposition products:

- **Gas Clean Filter Hydrocarbon**
  - Under normal conditions of storage and use, hazardous decomposition products should not be produced.

- **Gas Clean Filter Oxygen**
  - Under normal conditions of storage and use, hazardous decomposition products should not be produced.

- **Gas Clean Filter Moisture**
  - 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>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas Clean Filter Hydrocarbon carbon</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>&gt;10000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Gas Clean Filter Oxygen Copper oxide, Activated</td>
<td>LD50 Dermal</td>
<td>Rat - Male, Female</td>
<td>&gt;2000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>470 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>3478 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LC50 Inhalation Dusts and mists</td>
<td>Rat - Male, Female</td>
<td>&gt;5.08 mg/l</td>
<td>4 hours</td>
</tr>
</tbody>
</table>

Irritation/Corrosion

Not available.

Sensitization

Not available.

Conclusion/Summary

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Section 11. Toxicological information

**Skin**
- Gas Clean Filter Oxygen: May cause sensitization by skin contact.

**Mutagenicity**
- **Conclusion/Summary**: Not available.

**Carcinogenicity**
- **Conclusion/Summary**: Not available.

**Classification**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>IARC</th>
<th>NTP</th>
<th>ACGIH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas Clean Filter Oxygen</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manganese dioxide</td>
<td>-</td>
<td>-</td>
<td>A4</td>
</tr>
<tr>
<td>nickel monoxide</td>
<td>1</td>
<td>Known to be a human carcinogen.</td>
<td>A1</td>
</tr>
<tr>
<td>Gas Clean Filter Moisture</td>
<td>1</td>
<td>Known to be a human carcinogen.</td>
<td>A2</td>
</tr>
<tr>
<td>crystalline silica, respirable powder</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>cristobalite</td>
<td>1</td>
<td>Known to be a human carcinogen.</td>
<td>A2</td>
</tr>
</tbody>
</table>

**Reproductive toxicity**
- **Conclusion/Summary**: Not available.

**Teratogenicity**
- **Conclusion/Summary**: Not available.

**Specific target organ toxicity (single exposure)**
Not available.

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

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas Clean Filter Oxygen</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manganese dioxide</td>
<td>Category 2</td>
<td>inhalation</td>
<td>brain</td>
</tr>
<tr>
<td>nickel monoxide</td>
<td>Category 1</td>
<td>inhalation</td>
<td>lungs</td>
</tr>
<tr>
<td>Gas Clean Filter Moisture</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>crystalline silica, respirable powder</td>
<td>Category 1</td>
<td>inhalation</td>
<td>lungs</td>
</tr>
<tr>
<td>cristobalite</td>
<td>Category 1</td>
<td>inhalation</td>
<td>lungs</td>
</tr>
</tbody>
</table>

**Aspiration hazard**
Not available.

**Information on the likely routes of exposure**
- Gas Clean Filter Hydrocarbon: Not available.
- Gas Clean Filter Oxygen: Routes of entry anticipated: Oral, Dermal, Inhalation.
- Gas Clean Filter Moisture: Routes of entry anticipated: Oral, Dermal, Inhalation.

**Potential acute health effects**

**Eye contact**
- Gas Clean Filter Hydrocarbon: Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
- Gas Clean Filter Oxygen: No known significant effects or critical hazards.
- Gas Clean Filter Moisture: No known significant effects or critical hazards.

**Inhalation**
- Gas Clean Filter Hydrocarbon: Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
- Gas Clean Filter Oxygen: Harmful if inhaled.
- Gas Clean Filter Moisture: No known significant effects or critical hazards.
Section 11. Toxicological information

Skin contact:
- Gas Clean Filter Hydrocarbon: No known significant effects or critical hazards.
- Gas Clean Filter Oxygen: May cause an allergic skin reaction.
- Gas Clean Filter Moisture: No known significant effects or critical hazards.

Ingestion:
- Gas Clean Filter Hydrocarbon: No known significant effects or critical hazards.
- Gas Clean Filter Oxygen: No known significant effects or critical hazards.
- Gas Clean Filter Moisture: No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact:
- Gas Clean Filter Hydrocarbon: Adverse symptoms may include the following:
  - irritation
  - redness
- Gas Clean Filter Oxygen: No specific data.
- Gas Clean Filter Moisture: No specific data.

Inhalation:
- Gas Clean Filter Hydrocarbon: Adverse symptoms may include the following:
  - respiratory tract irritation
  - coughing
- Gas Clean Filter Oxygen: No specific data.
- Gas Clean Filter Moisture: No specific data.

Skin contact:
- Gas Clean Filter Hydrocarbon: No specific data.
- Gas Clean Filter Oxygen: Adverse symptoms may include the following:
  - irritation
  - redness
- Gas Clean Filter Moisture: No specific data.

Ingestion:
- Gas Clean Filter Hydrocarbon: No specific data.
- Gas Clean Filter Oxygen: No specific data.
- Gas Clean Filter Moisture: No specific data.

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

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

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

Potential chronic health effects
- General:
  - Gas Clean Filter Hydrocarbon: Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.
  - Gas Clean Filter Oxygen: May cause damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
  - Gas Clean Filter Moisture: Causes damage to organs through prolonged or repeated exposure.
Section 11. Toxicological information

**Carcinogenicity:**
- Gas Clean Filter Hydrocarbon: No known significant effects or critical hazards.
- Gas Clean Filter Oxygen: No known significant effects or critical hazards.
- Gas Clean Filter Moisture: No known significant effects or critical hazards.

**Mutagenicity:**
- Gas Clean Filter Hydrocarbon: No known significant effects or critical hazards.
- Gas Clean Filter Oxygen: No known significant effects or critical hazards.
- Gas Clean Filter Moisture: No known significant effects or critical hazards.

**Reproductive toxicity:**
- Gas Clean Filter Hydrocarbon: No known significant effects or critical hazards.
- Gas Clean Filter Oxygen: No known significant effects or critical hazards.
- Gas Clean Filter Moisture: 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>Gas Clean Filter Oxygen</td>
<td>4579.9</td>
<td>27472.5</td>
<td>N/A</td>
<td>N/A</td>
<td>1.6</td>
</tr>
<tr>
<td>Copper oxide, Activated</td>
<td>470</td>
<td>2500</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Manganese dioxide</td>
<td>3478</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>1.5</td>
</tr>
</tbody>
</table>

**Other information:**
- Gas Clean Filter Hydrocarbon: Not available.
- Gas Clean Filter Oxygen: Adverse symptoms may include the following: May cause skin sensitization.
- Gas Clean Filter Moisture: Not available.

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>Gas Clean Filter Hydrocarbon carbon</td>
<td>Acute LC50 1000 mg/l Fresh water</td>
<td>Fish - Danio rerio</td>
<td>96 hours</td>
</tr>
<tr>
<td>Gas Clean Filter Oxygen</td>
<td>Acute LC50 2.6 mg/l Fresh water</td>
<td>Daphnia - Daphnia magna - Neonate</td>
<td>48 hours</td>
</tr>
<tr>
<td>Copper oxide, Activated</td>
<td>Acute LC50 &gt;56000 ppm Fresh water</td>
<td>Fish - Gambusia affinis - Adult Algae - Desmodesmus subspicatus</td>
<td>96 hours 72 hours</td>
</tr>
<tr>
<td>Manganese dioxide</td>
<td>Acute EC50 &gt;100 mg/l Fresh water</td>
<td>Daphnia - Daphnia magna</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 &gt;100 mg/l Fresh water</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute NOEC &gt;100 mg/l Fresh water</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 10 mg/l Fresh water</td>
<td>Daphnia - Ceriodaphnia dubia</td>
<td>8 days</td>
</tr>
</tbody>
</table>

**Persistence and degradability**
Not available.

Date of issue/Date of revision: 11/09/2021  Date of previous issue: No previous validation  Version: 1
Section 12. Ecological information

**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>Gas Clean Filter Oxygen nickel monoxide</td>
<td>-</td>
<td>5613</td>
<td>high</td>
</tr>
</tbody>
</table>

**Mobility in soil**

- **Soil/water partition coefficient (K<sub>oc</sub>)** : 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. 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>UN3077</td>
<td>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Copper oxide, Activated)</td>
<td>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Copper oxide, Activated)</td>
<td>Environmentally hazardous substance, solid, n.o.s. (Copper oxide, Activated)</td>
</tr>
</tbody>
</table>

**Transport hazard class(es)** : 9

**Packing group** : III

**Environmental hazards** : Yes.

**Proof of classification statement** : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.43-2.45 (Class 9), 2.7 (Marine pollutant mark).

**Additional information**

*Date of issue/Date of revision* : 11/09/2021  
*Date of previous issue* : No previous validation  
*Version* : 1
Section 14. Transport information

TDG Classification : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.43-2.45 (Class 9), 2.7 (Marine pollutant mark). Non-bulk packages of this product are not regulated as dangerous goods when transported by road or rail.

Explosive Limit and Limited Quantity Index 5

Special provisions 16, 99

IMDG : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

Emergency schedules F-A, S-F

Special provisions 274, 335, 966, 967, 969

IATA : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.


Special provisions A97, A158, A179, A197, A215

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.

Section 15. Regulatory information

Canadian lists

Canadian NPRI : The following components are listed: copper (and its compounds); manganese (and its compounds)

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 : Not determined.

China : All components are listed or exempted.

Europe : 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.
Section 15. Regulatory information

New Zealand: All components are listed or exempted.
Philippines: Not determined.
Republic of Korea: Not determined.
Taiwan: All components are listed or exempted.
Thailand: All components are listed or exempted.
Turkey: Not determined.
United States: All components are active or exempted.
Viet Nam: Not determined.

Section 16. Other information

History
Date of issue/Date of revision: 11/09/2021
Date of previous issue: No previous validation
Version: 1

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>Gas Clean Filter Hydrocarbon</td>
<td>COMBUSTIBLE DUSTS - Category 1</td>
</tr>
<tr>
<td>Gas Clean Filter Oxygen</td>
<td>ACUTE TOXICITY (inhalation) - Category 4</td>
</tr>
<tr>
<td></td>
<td>SKIN SENSITIZATION - Category 1</td>
</tr>
<tr>
<td></td>
<td>CARCINOGENICITY - Category 1</td>
</tr>
<tr>
<td></td>
<td>SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2</td>
</tr>
<tr>
<td></td>
<td>AQUATIC HAZARD (ACUTE) - Category 1</td>
</tr>
<tr>
<td></td>
<td>AQUATIC HAZARD (LONG-TERM) - Category 2</td>
</tr>
<tr>
<td>Gas Clean Filter Moisture</td>
<td>CARCINOGENICITY - Category 1</td>
</tr>
<tr>
<td></td>
<td>SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1</td>
</tr>
</tbody>
</table>

References: Not available.

Indicates information that has changed from previously issued version.

Notice to reader

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