

# SAFETY DATA SHEET

ReNEWable Gas Purifier - New Cartridge, Part Number G3440-60003

## 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** : ReNEWable Gas Purifier - New Cartridge, Part Number G3440-60003  
**Part no.** : G3440-60003

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

**Material uses** :  Reagents and Standards for Analytical Chemistry Laboratory Use  
 Sealed cartridge  
 0.029 kg

**Supplier/Manufacturer** : Agilent Technologies Australia Pty Ltd  
 679 Springvale Road  
 Mulgrave  
 Victoria 3170, Australia  
 1800 802 402

**Emergency telephone number (with hours of operation)** : CHEMTREC®: +(61)-290372994

**Note \*** : Observe technical data sheet/instructions for use.

## Section 2. Hazard(s) 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

H251 SELF-HEATING SUBSTANCES AND MIXTURES - Category 1  
 H332 ACUTE TOXICITY (inhalation) - Category 4  
 H315 SKIN CORROSION/IRRITATION - Category 2  
 H318 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1  
 H350 CARCINOGENICITY - Category 1A  
 H373 SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2  
 H402 SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 3  
 H412 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3

Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 10 - 30%  
 Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: > 60%  
 Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 1 - 10%  
 Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 3%

### GHS label elements

**Hazard pictograms**



**Signal word** : DANGER

## Section 2. Hazard(s) identification

- Hazard statements** : H251 - Self-heating: may catch fire.  
 H332 - Harmful if inhaled.  
 H318 - Causes serious eye damage.  
 H315 - Causes skin irritation.  
 H350 - May cause cancer.  
 H373 - May cause damage to organs through prolonged or repeated exposure.  
 H412 - Harmful to aquatic life with long lasting effects.
- Precautionary statements**
- Prevention** : P201 - Obtain special instructions before use.  
 P202 - Do not handle until all safety precautions have been read and understood.  
 P281 - Use personal protective equipment as required.  
 P280 - Wear protective gloves. Wear eye or face protection.  
 P235 - Keep cool.  
 P410 - Protect from sunlight.  
 P271 - Use only outdoors or in a well-ventilated area.  
 P273 - Avoid release to the environment.  
 P260 - Do not breathe dust.  
 P264 - Wash hands thoroughly after handling.
- Response** : P314 - Get medical attention if you feel unwell.  
 P308 + P313 - IF exposed or concerned: Get medical attention.  
 P304 + P340 + P312 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.  
 P302 + P352 + P362 + P363 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse.  
 P332 + P313 - If skin irritation occurs: Get medical attention.  
 P305 + P351 + P338 + P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.
- Storage** : P405 - Store locked up.  
 P413 - Store bulk masses greater than 15 kg/33 lbs at temperatures not exceeding 100 °C/212 °F.  
 P407 - Maintain air gap between stacks.  
 P420 - Store away from other materials.
- Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Supplemental label elements**
- Additional warning phrases** : Not applicable.
- Other hazards which do not result in classification** : Causes digestive tract burns.

## Section 3. Composition and ingredient information

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.

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

### CAS number/other identifiers

## Section 3. Composition and ingredient information

| Ingredient name                       | % (w/w)   | CAS number |
|---------------------------------------|-----------|------------|
| Zeolites                              | ≥30 - ≤60 | 1318-02-1  |
| Copper oxide, Activated               | ≤12       | 1317-38-0  |
| Manganese dioxide, Activated          | ≤12       | 1313-13-9  |
| Silicon dioxide                       | ≥10 - ≤30 | 7631-86-9  |
| aluminium oxide                       | ≤10       | 1344-28-1  |
| Disodium oxide                        | <5        | 1313-59-3  |
| Calcium oxide                         | ≤5        | 1305-78-8  |
| crystalline silica, respirable powder | ≤3        | 14808-60-7 |

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** : Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Call a poison center or physician. 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. 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** : Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician. 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. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

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

#### Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : Harmful if inhaled.
- Skin contact** : Causes skin irritation.
- Ingestion** : Corrosive to the digestive tract. Causes burns.

#### Over-exposure signs/symptoms

## Section 4. First aid measures

- Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur
- Ingestion** : Adverse symptoms may include the following:  
stomach pains

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

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Firefighting measures

### Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

**Specific hazards arising from the chemical** : Self-heating material. May catch fire. This material is harmful 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.

**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.

**Hazchem code** : 1Y

## 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 spilt 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** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental precautions** : Avoid dispersal of spilt 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.

### Methods and material for containment and cleaning up

**Methods for cleaning up** : 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.

## Section 7. Handling and storage

### Precautions for safe handling

**Protective measures** : 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. 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.

**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 bulk masses greater than 15 kg/33 lbs at temperatures not exceeding 100 °C/212 °F. Store locked up. Eliminate all ignition sources. Store away from other materials. Maintain air gap between stacks/pallets. 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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls and 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

| Ingredient name              | Exposure limits   |
|------------------------------|---|
| Zeolites                     | <b>ACGIH TLV (United States, 3/2017).</b><br>TWA: 1 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction  |
| Copper oxide, Activated      | <b>ACGIH TLV (United States).</b><br>TWA: 1 mg/m <sup>3</sup> , (Cu) 8 hours. Form: Total dust            |
| Manganese dioxide, Activated | <b>Safe Work Australia (Australia, 1/2014).</b><br>TWA: 1 mg/m <sup>3</sup> , (as Mn) 8 hours. Form: Dust |

## Section 8. Exposure controls and personal protection

|                                       |  |
|---------------------------------------|--|
| Silicon dioxide                       | <b>Safe Work Australia (Australia, 1/2014).</b><br>TWA: 2 mg/m <sup>3</sup> 8 hours. Form: Respirable dust and fumes |
| aluminium oxide                       | <b>Safe Work Australia (Australia, 1/2014).</b><br>TWA: 10 mg/m <sup>3</sup> 8 hours.                                |
| Calcium oxide                         | <b>Safe Work Australia (Australia, 1/2014).</b><br>TWA: 2 mg/m <sup>3</sup> 8 hours.                                 |
| crystalline silica, respirable powder | <b>Safe Work Australia (Australia, 1/2014).</b><br>TWA: 0.1 mg/m <sup>3</sup> 8 hours. Form: Respirable dust         |

- Appropriate engineering controls** : Use only with adequate ventilation. Engineering controls may be required to control the primary or secondary risks associated with this product. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory 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 and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.



## Section 9. Physical and chemical properties

### Appearance

|  |                  |
|--|------------------|
| Physical state                               | : Solid.         |
| Colour                                       | : Not available. |
| Odour  | : Not available. |
| Odour threshold                              | : Not available. |
| pH   | : Not available. |
| Melting point                                | : Not available. |
| Boiling point                                | : Not available. |
| Flash point                                  | : Not available. |
| Evaporation rate                             | : Not available. |
| Flammability (solid, gas)                    | : Not available. |
| Lower and upper explosive (flammable) limits | : Not available. |
| Vapour pressure                              | : Not available. |
| Vapour density                               | : Not available. |
| Relative density                             | : Not available. |
| Solubility                                   | : Not available. |
| Partition coefficient: n-octanol/water       | : Not available. |
| Auto-ignition temperature                    | : Not available. |
| Decomposition temperature                    | : Not available. |
| Viscosity                                    | : Not available. |

## Section 10. Stability and reactivity

|                                    |  |
|------------------------------------|--|
| Reactivity                         | : This product, by reaction with air and without energy supply, is liable to self-heat and will ignite when in large amounts and after long periods of time. The spontaneous ignition temperature will be $\leq 50^{\circ}\text{C}$ for a volume of 450 litres.              |
| Chemical stability                 | : The product is stable.   |
| Possibility of hazardous reactions | : Hazardous reactions or instability may occur under certain conditions of storage or use.<br>Conditions may include the following:<br>extended contact with air in bulk storage<br>Reactions may include the following:<br>risk of causing fire<br>spontaneous flammability |
| Conditions to avoid                | : No specific data.  |
| Incompatible materials             | : May react or be incompatible with oxidising materials.<br>Reactive or incompatible with the following materials: moisture.   |
| 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

| Product/ingredient name      | Result                          | Species            | Dose                    | Exposure |
|------------------------------|---------------------------------|--------------------|-------------------------|----------|
| Zeolites                     | LD50 Oral                       | Rat                | >5110 mg/kg             | -        |
| Copper oxide, Activated      | LD50 Oral                       | Rat                | 470 mg/kg               | -        |
| Manganese dioxide, Activated | LD50 Oral                       | Rat                | 3478 mg/kg              | -        |
| Silicon dioxide              | LC50 Inhalation Dusts and mists | Rat - Male, Female | 58.8 mg/l               | 4 hours  |
| aluminium oxide              | LD50 Oral                       | Rat                | >10000 mg/kg            | -        |
| Calcium oxide                | LC50 Inhalation Dusts and mists | Rat - Male, Female | >6040 mg/m <sup>3</sup> | 4 hours  |
|                              | LD50 Oral                       | Rat - Female       | 2000 mg/kg              | -        |

#### Irritation/Corrosion

Not available.

#### Sensitisation

Not available.

#### Mutagenicity

**Conclusion/Summary** : Not available.

#### Carcinogenicity

**Conclusion/Summary** : Not available.

#### Reproductive toxicity

**Conclusion/Summary** : Not available.

#### Teratogenicity

**Conclusion/Summary** : Not available.

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

| Name          | Category   | Route of exposure | Target organs                |
|---------------|------------|-------------------|------------------------------|
| Calcium oxide | Category 3 | Not applicable.   | Respiratory tract irritation |

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

| Name                                  | Category   | Route of exposure | Target organs  |
|---------------------------------------|------------|-------------------|----------------|
| crystalline silica, respirable powder | Category 1 | Not determined    | Not determined |

#### Aspiration hazard

Not available.

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

#### Potential acute health effects

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

**Inhalation** :  Harmful if inhaled.

**Skin contact** :  Causes skin irritation.

**Ingestion** : Corrosive to the digestive tract. Causes burns.

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



## Section 11. Toxicological information

- Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur
- Ingestion** : Adverse symptoms may include the following:  
stomach pains

### Delayed and immediate effects as well as 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

| Product/ingredient name | Result             | Species               | Dose        | Exposure |
|-------------------------|--------------------|-----------------------|-------------|----------|
| Zeolites                | Chronic NOAEL Oral | Rat - Male,<br>Female | >5000 mg/kg | 7 days   |

- General** : May cause damage to organs through prolonged or repeated exposure.
- Carcinogenicity** : May cause cancer. Risk of cancer depends on duration and level of exposure.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

| Route                                | ATE value                |
|--------------------------------------|--------------------------|
| Oral<br>Inhalation (dusts and mists) | 2422.7 mg/kg<br>3.6 mg/l |

## Section 12. Ecological information

### Toxicity

| Product/ingredient name             | Result                               | Species                              | Exposure |
|-------------------------------------|--------------------------------------|--------------------------------------|----------|
| Zeolites<br>Copper oxide, Activated | Chronic NOEC 200000 µg/l Fresh water | Daphnia - Daphnia magna              | 21 days  |
|                                     | Acute LC50 2.6 mg/l Fresh water      | Daphnia - Daphnia magna -<br>Neonate | 48 hours |
| Manganese dioxide,<br>Activated     | Acute LC50 >56000 ppm Fresh water    | Fish - Gambusia affinis - Adult      | 96 hours |
|                                     | Acute EC50 >100 mg/l Fresh water     | Algae                                | 72 hours |
|                                     | Acute LC50 >100 mg/l Fresh water     | Daphnia                              | 48 hours |
|                                     | Acute LC50 >100 mg/l Fresh water     | Fish                                 | 96 hours |
|                                     | Acute NOEC 100 mg/l Fresh water      | Daphnia                              | 48 hours |

## Section 12. Ecological information

|                                    |   |  |                                  |
|------------------------------------|---|--|----------------------------------|
| Silicon dioxide<br>aluminium oxide | Acute NOEC >100 mg/l Fresh water<br>Acute EC50 >10000 mg/l Fresh water<br>Acute EC50 114.357 mg/l Fresh water | Fish<br>Algae<br>Daphnia - Daphnia magna -<br>Neonate                                  | 96 hours<br>72 hours<br>48 hours |
| Calcium oxide                      | Acute LC50 ≥1070 mg/l Fresh water<br>Chronic NOEC 100 mg/l Fresh water  | Fish<br>Fish - Oreochromis niloticus -<br>Juvenile (Fledgling, Hatchling,<br>Weanling) | 96 hours<br>46 days              |

### Persistence and degradability

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|-------------------------|-------------------|------------|------------------|
| Silicon dioxide         | -                 | -          | Not readily      |

### Bioaccumulative potential

| Product/ingredient name | LogP <sub>ow</sub> | BCF          | Potential |
|-------------------------|--------------------|--------------|-----------|
| Zeolites                | -                  | 0.59 to 0.95 | low       |
| Calcium oxide           | -                  | 2.34         | low       |

### 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 minimised 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 spilt 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.

|                         | ADG   | IMDG  | IATA   |
|-------------------------|---|---|--|
| UN number               | UN3190  | UN3190  | UN3190   |
| UN proper shipping name | SELF-HEATING SOLID, INORGANIC, N.O.S. (Manganese dioxide, Activated, Copper oxide, Activated) | SELF-HEATING SOLID, INORGANIC, N.O.S. (Manganese dioxide, Activated, Copper oxide, Activated) | Self-heating solid, inorganic, n. o.s. (Manganese dioxide, Activated, Copper oxide, Activated) |
|                         |   |   |  |

**Section 14. Transport information**

|                                   |  |  |  |
|-----------------------------------|--|--|--|
| <b>Transport hazard class(es)</b> | 4.2<br> | 4.2<br> | 4.2<br> |
| <b>Packing group</b>              | II   | II   | II   |
| <b>Environmental hazards</b>      | No.  | No.  | No.  |

**Additional information****Remarks:** Excepted Quantity

**ADG** : **Hazchem code** 1Y  
**Special provisions** 274

**IMDG** : **Emergency schedules** F-A, S-J  
**Special provisions** 274

**IATA** :  The environmentally hazardous substance mark may appear if required by other transportation regulations.  
**Quantity limitation** Passenger and Cargo Aircraft: 15 kg. Packaging instructions: 467. Cargo Aircraft Only: 50 kg. Packaging instructions: 470. Limited Quantities - Passenger Aircraft: Forbidden. Packaging instructions: Forbidden.  
**Special provisions** A3, A803

**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 Annex II of Marpol and the IBC Code** : Not available.

**Section 15. Regulatory information****Standard Uniform Schedule of Medicine and Poisons**

5

**Model Work Health and Safety Regulations - Scheduled Substances**

| <b>Ingredient name</b>   | <b>Schedule</b>   |
|--|---|
| <input checked="" type="checkbox"/> Quartz (respirable fraction) | Restricted hazardous chemical [For abrasive blasting at a concentration of greater than 1%] |

**International regulations****Chemical Weapon Convention List Schedules I, II & III Chemicals**

Not listed.

**Montreal Protocol (Annexes A, B, C, E)**

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.

## Section 15. Regulatory information

|                          |   |
|--------------------------|---|
| <b>Canada</b>            | : Not determined.   |
| <b>China</b>             | : All components are listed or exempted.  |
| <b>Europe</b>            | : All components are listed or exempted.  |
| <b>Japan</b>             | : <b>Japan inventory (ENCS):</b> All components are listed or exempted.<br><b>Japan inventory (ISHL):</b> Not determined. |
| <b>Malaysia</b>          | : All components are listed or exempted.  |
| <b>New Zealand</b>       | : All components are listed or exempted.  |
| <b>Philippines</b>       | : All components are listed or exempted.  |
| <b>Republic of Korea</b> | : All components are listed or exempted.  |
| <b>Taiwan</b>            | : All components are listed or exempted.  |
| <b>Thailand</b>          | : <input checked="" type="checkbox"/> Not determined.   |
| <b>Turkey</b>            | : All components are listed or exempted.  |
| <b>United States</b>     | : All components are listed or exempted.  |
| <b>Viet Nam</b>          | : <input checked="" type="checkbox"/> Not determined.   |

## Section 16. Any other relevant information

### History

|                                       |              |
|---------------------------------------|--------------|
| <b>Date of issue/Date of revision</b> | : 08/03/2018 |
| <b>Date of previous issue</b>         | : 24/03/2016 |
| <b>Version</b>                        | : 2          |

### Key to abbreviations

|   |
|---|
| : ADG = Australian Dangerous Goods  |
| : ATE = Acute Toxicity Estimate   |
| : BCF = Bioconcentration Factor   |
| : GHS = Globally Harmonized System of Classification and Labelling of Chemicals   |
| : IATA = International Air Transport Association  |
| : IBC = Intermediate Bulk Container   |
| : IMDG = International Maritime Dangerous Goods   |
| : LogPow = logarithm of the octanol/water partition coefficient   |
| : MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) |
| : NOHSC = National Occupational Health and Safety Commission  |
| : SUSMP = Standard Uniform Schedule of Medicine and Poisons   |
| : UN = United Nations   |

### Procedure used to derive the classification

| Classification   | Justification   |
|--|---|
| <input checked="" type="checkbox"/> Self-heat. 1, H251<br>Acute Tox. 4, H332<br>Skin Irrit. 2, H315<br>Eye Dam. 1, H318<br>Carc. 1A, H350<br>STOT RE 2, H373<br>Aquatic Acute 3, H402<br>Aquatic Chronic 3, H412 | Expert judgment<br>Calculation method<br>Calculation method<br>Calculation method<br>Calculation method<br>Calculation method<br>Calculation method<br>Calculation method |

**References** : Not available.

Indicates information that has changed from previously issued version.

### Notice to reader

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

**Note \*** : Observe technical data sheet/instructions for use.