SAFETY DATA SHEET
Gas Clean Carrier Gas filter kit (1/8in), Part Number CP17976

SECTION 1: Identification of the substance/mixture and of the company/undertaking

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

1.1 Product identifier
Product name: Gas Clean Carrier Gas filter kit (1/8in), Part Number CP17976
Part No.: CP17976

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

<table>
<thead>
<tr>
<th>Identified uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analytical chemistry.</td>
</tr>
<tr>
<td>A kit containing: 2 x CP17973</td>
</tr>
</tbody>
</table>

1.3 Details of the supplier of the safety data sheet
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str. 8
76337 Waldbronn
Germany
0800 603 1000

E-mail address of person responsible for this SDS: pdl-msds_author@agilent.com

1.4 Emergency telephone number
Emergency telephone number (with hours of operation): CHEMTREC®: +(44)-870-8200418

SECTION 2: Hazards 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.

2.1 Classification of the substance or mixture
Product definition: Mixture (encapsulated in article)

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]
H350 CARCINOGENICITY - Category 1A
H372 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
H412 LONG-TERM AQUATIC HAZARD - Category 3

Ingredients of unknown toxicity: Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 10.2%

Ingredients of unknown ecotoxicity: Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 17.2%

See Section 16 for the full text of the H statements declared above.
See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Date of issue/Date of revision: 22/03/2016
SECTION 2: Hazards identification

Hazard pictograms : 

Signal word : Danger
Hazard statements : H350 - May cause cancer.
H372 - Causes 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.
P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing.
P273 - Avoid release to the environment.
P260 - Do not breathe dust.
Response : P314 - Get medical attention if you feel unwell.
P308 + P313 - IF exposed or concerned: Get medical attention.
Storage : P405 - Store locked up.
Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous ingredients : aluminium oxide
crystalline silica, respirable powder
nickel monoxide

Supplemental label elements : Contains nickel monoxide. May produce an allergic reaction.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Restricted to professional users.

Special packaging requirements : Tactile warning of danger : Not applicable.

2.3 Other hazards

Other hazards which do not result in classification : 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.

3.2 Mixtures : Mixture (encapsulated in article)

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Identifiers</th>
<th>%</th>
<th>Classification</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>aluminium oxide</td>
<td>EC: 215-691-6</td>
<td>≥50 - ≤75</td>
<td>STOT RE 1, H372 (lungs) (inhalation)</td>
<td>[1] [2]</td>
</tr>
<tr>
<td></td>
<td>CAS: 1344-28-1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CAS: 1313-13-9</td>
<td></td>
<td>Acute Tox. 4, H332</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Index: 025-001-00-3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Copper oxide, Activated</td>
<td>EC: 215-269-1</td>
<td>≤9.5</td>
<td>Acute Tox. 4, H302</td>
<td>[1]</td>
</tr>
<tr>
<td></td>
<td>CAS: 1317-38-0</td>
<td></td>
<td>Eye Irrit. 2, H319</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>STOT SE 3, H335</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Aquatic Chronic 2, H411</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CAS: 7440-44-0</td>
<td></td>
<td>STOT RE 2, H373 (lungs)</td>
<td></td>
</tr>
</tbody>
</table>

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Gas Clean Carrier Gas filter kit (1/8in), Part Number CP17976

SECTION 3: Composition/information on ingredients

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>EC:</th>
<th>CAS:</th>
<th>≤3</th>
<th>Carc. 1A, H350 STOT SE 2, H371 (lungs) (inhalation)</th>
<th>[1] [2]</th>
</tr>
</thead>
<tbody>
<tr>
<td>crystalline silica, respirable powder</td>
<td>238-878-4</td>
<td>14808-60-7</td>
<td>≤3</td>
<td>Skin Sens. 1, H317</td>
<td>[1] [2]</td>
</tr>
<tr>
<td>nickel monoxide</td>
<td>215-215-7</td>
<td>1313-99-1</td>
<td>&lt;1</td>
<td>Carc. 1A, H350i (inhalation)</td>
<td>[1] [2]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Index: 028-003-00-2</td>
<td></td>
<td>STOT RE 1, H372</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Aquatic Chronic 4, H413</td>
<td></td>
</tr>
</tbody>
</table>

See Section 16 for the full text of the H statements declared above.

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.

**Type**

1. Substance classified with a health or environmental hazard
2. Substance with a workplace exposure limit
3. Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
4. Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
5. Substance of equivalent concern

SECTION 4: First aid measures

4.1 Description of first aid measures

**Eye contact**

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

**Inhalation**

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If 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**

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**Ingestion**

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

**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.

4.2 Most important symptoms and effects, both acute and delayed

**Potential acute health effects**

**Eye contact**

No known significant effects or critical hazards.

**Inhalation**

No known significant effects or critical hazards.

**Skin contact**

No known significant effects or critical hazards.

**Ingestion**

No known significant effects or critical hazards.

**Over-exposure signs/symptoms**

**Eye contact**

No specific data.

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SECTION 4: First aid measures

Inhalation : No specific data.
Skin contact : No specific data.
Ingestion : No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

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

Specific treatments

SECTION 5: Firefighting measures

5.1 Extinguishing media

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

Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

5.3 Advice for firefighters

Special precautions 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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

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".

6.2 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.

6.3 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. Dispose of via a licensed waste disposal contractor.

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SECTION 6: Accidental release measures

6.4 Reference to other sections:
See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures:
Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. 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. 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.

Advice on general occupational hygiene:
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities:
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 unlabelled containers. Use appropriate containment to avoid environmental contamination.

Seveso Directive - Reporting thresholds (in tonnes)

<table>
<thead>
<tr>
<th>Name</th>
<th>Notification and MAPP threshold</th>
<th>Safety report threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel compounds inhalable powder form</td>
<td>-</td>
<td>1</td>
</tr>
</tbody>
</table>

7.3 Specific end use(s)

Recommendations:
Industrial applications, Professional applications.

Industrial sector specific solutions:
Not applicable.

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.

8.1 Control parameters

Occupational exposure limits

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Exposure limit values</th>
</tr>
</thead>
<tbody>
<tr>
<td>aluminium oxide</td>
<td>EH40/2005 WELs (United Kingdom (UK), 12/2011). TWA: 10 mg/m³ 8 hours. Form: inhalable dust</td>
</tr>
<tr>
<td>Manganese dioxide</td>
<td>EH40/2005 WELs (United Kingdom (UK), 12/2011). TWA: 0.5 mg/m³, (as Mn) 8 hours.</td>
</tr>
<tr>
<td>crystalline silica, respirable powder</td>
<td>EH40/2005 WELs (United Kingdom (UK), 12/2011). TWA: 0.1 mg/m³ 8 hours. Form: respirable dust</td>
</tr>
<tr>
<td>nickel monoxide</td>
<td>EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin. Inhalation sensitiser. Notes: as Ni TWA: 0.5 mg/m³, (as Ni) 8 hours.</td>
</tr>
</tbody>
</table>
**SECTION 8: Exposure controls/personal protection**

**Recommended monitoring procedures**: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

**DNELs/DMELs**
No DNELs/DMELs available.

**PNECs**
No PNECs available

**8.2 Exposure controls**

**Appropriate engineering controls**: If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**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: safety glasses with side-shields.

**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.

**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.

**Date of issue/Date of revision**: 22/03/2016
SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>Colour</td>
<td>Not available</td>
</tr>
<tr>
<td>Odour</td>
<td>Not available</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>Not available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not available</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapour density</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not available</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>Not available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Not available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>Not available</td>
</tr>
</tbody>
</table>

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

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

10.2 Chemical stability: The product is stable.

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

10.4 Conditions to avoid: No specific data.

10.5 Incompatible materials: May react or be incompatible with oxidising materials.

10.6 Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>aluminium oxide</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>&gt;5000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Manganese dioxide</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>3478 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Copper oxide, Activated</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>470 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Carbon, Activated</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>≥2000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>nickel monoxide</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>&gt;5000 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

Acute toxicity estimates

<table>
<thead>
<tr>
<th>Route</th>
<th>ATE value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral (dusts and mists)</td>
<td>2677 mg/kg</td>
</tr>
<tr>
<td></td>
<td>15.13 mg/l</td>
</tr>
</tbody>
</table>

Irritation/Corrosion

Conclusion/Summary : Not available.

Sensitiser

Conclusion/Summary : Not available.

Chronic toxicity / Carcinogenicity / Mutagenicity / Teratogenicity / Reproductive toxicity

Not available.

Specific target organ toxicity (single exposure)

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper oxide, Activated</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation</td>
</tr>
<tr>
<td>crystalline silica, respirable powder</td>
<td>Category 2</td>
<td>Inhalation</td>
<td>lungs</td>
</tr>
</tbody>
</table>

Specific target organ toxicity (repeated exposure)

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>aluminium oxide</td>
<td>Category 1</td>
<td>Inhalation</td>
<td>lungs</td>
</tr>
<tr>
<td>Carbon, Activated</td>
<td>Category 2</td>
<td>Not determined</td>
<td>lungs</td>
</tr>
<tr>
<td>nickel monoxide</td>
<td>Category 1</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

Aspiration hazard

Not available.

Information on likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Inhalation : No known significant effects or critical hazards.
Ingestion  : No known significant effects or critical hazards.
Skin contact : No known significant effects or critical hazards.
Eye contact : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation : No specific data.
Ingestion  : No specific data.
Skin contact : No specific data.
Eye contact : No specific data.

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.
SECTION 11: Toxicological information

Long term exposure

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

Potential chronic health effects

General: Causes 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.

SECTION 12: Ecological information

12.1 Toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>aluminium oxide</td>
<td>Acute EC50 114.357 mg/l Fresh water</td>
<td>Daphnia - Daphnia magna - Neonate</td>
<td>48 hours</td>
</tr>
<tr>
<td>Manganese dioxide</td>
<td>EC50 &gt;100 mg/l Fresh water</td>
<td>Algae - Desmodesmus subspicatus</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fish - Oncorhynchus mykiss</td>
<td>96 hours</td>
</tr>
<tr>
<td>Copper oxide, Activated</td>
<td>LC50 &gt;100 mg/l</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>NOEC &gt;100 mg/l</td>
<td>Daphnia - Daphnia magna - Neonate</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 2.6 mg/l Fresh water</td>
<td>Fish - Gambusia affinis - Adult</td>
<td>96 hours</td>
</tr>
</tbody>
</table>

12.2 Persistence and degradability
Not available.

12.3 Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP&lt;sub&gt;ow&lt;/sub&gt;</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>nickel monoxide</td>
<td>-</td>
<td>5613</td>
<td>high</td>
</tr>
</tbody>
</table>

12.4 Mobility in soil

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

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.
vPvB: Not applicable.

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

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Date of issue/Date of revision: 22/03/2016
SECTION 13: Disposal considerations

**Methods of disposal**

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.

**Hazardous waste Packaging**

The classification of the product may meet the criteria for a hazardous waste.

**Special precautions**

The generation of waste should be avoided or minimised wherever possible. 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.

**Regulatory information**

**ADR/RID / IMDG / IATA**

Not regulated.

**14.6 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.

**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

Not available.

SECTION 15: Regulatory information

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

**EU Regulation (EC) No. 1907/2006 (REACH)**

**Annex XIV - List of substances subject to authorisation**

None of the components are listed.

**Substances of very high concern**

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**

Restricted to professional users.

**Other EU regulations**

Europe inventory: Not determined.

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Carcinogenic effects</th>
<th>Mutagenic effects</th>
<th>Developmental effects</th>
<th>Fertility effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz (SiO2)</td>
<td>Carc. 1A, H350</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>nickel monoxide</td>
<td>Carc. 1A, H350i</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Seveso Directive**

This product is controlled under the Seveso Directive.

**Date of issue/Date of revision**

22/03/2016 10/12
SECTION 15: Regulatory information

### Named substances

**Name**
Nickel compounds inhalable powder form

### National regulations

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>List name</th>
<th>Name on list</th>
<th>Classification</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>nickel monoxide</td>
<td>UK Occupational Exposure Limits EH40 - WEL</td>
<td>inorganic nickel compounds insoluble in water Except nickel carbonyl</td>
<td>Carc.</td>
<td>-</td>
</tr>
</tbody>
</table>

### 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 Inform Consent (PIC)**
Not listed.

**UNECE Aarhus Protocol on POPs and Heavy Metals**
Not listed.

### International lists

#### National inventory

**Australia**: Not determined.

**Canada**: Not determined.

**China**: All components are listed or exempted.


**Malaysia**: Not determined.

**New Zealand**: Not determined.

**Philippines**: Not determined.

**Republic of Korea**: Not determined.

**Taiwan**: All components are listed or exempted.

**Turkey**: Not determined.

**United States**: Not determined.

### 15.2 Chemical safety assessment

This product contains substances for which Chemical Safety Assessments might still be required.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

**Abbreviations and acronyms**

- ATE = Acute Toxicity Estimate
- CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
- DNEL = Derived No Effect Level
- EUH statement = CLP-specific Hazard statement
- PNEC = Predicted No Effect Concentration
- RRN = REACH Registration Number

**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

**Date of issue/Date of revision**: 22/03/2016
Gas Clean Carrier Gas filter kit (1/8in), Part Number CP17976

SECTION 16: Other information

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carc. 1A, H350</td>
<td>Calculation method</td>
</tr>
<tr>
<td>STOT RE 1, H372</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Aquatic Chronic 3, H412</td>
<td>Calculation method</td>
</tr>
<tr>
<td>H252</td>
<td>Self-heating in large quantities; may catch fire.</td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed.</td>
</tr>
<tr>
<td>H317</td>
<td>May cause an allergic skin reaction.</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>H332</td>
<td>Harmful if inhaled.</td>
</tr>
<tr>
<td>H352</td>
<td>May cause respiratory irritation.</td>
</tr>
<tr>
<td>H350</td>
<td>May cause cancer.</td>
</tr>
<tr>
<td>H350i (inhalation)</td>
<td>May cause cancer if inhaled.</td>
</tr>
<tr>
<td>H371 (lungs) (inhalation)</td>
<td>May cause damage to organs if inhaled. (lungs)</td>
</tr>
<tr>
<td>H372 (lungs) (inhalation)</td>
<td>Causes damage to organs through prolonged or repeated exposure if inhaled. (lungs)</td>
</tr>
<tr>
<td>H372</td>
<td>Causes damage to organs through prolonged or repeated exposure.</td>
</tr>
<tr>
<td>H373 (lungs)</td>
<td>May cause damage to organs through prolonged or repeated exposure. (lungs)</td>
</tr>
<tr>
<td>H411</td>
<td>Toxic to aquatic life with long lasting effects.</td>
</tr>
<tr>
<td>H412</td>
<td>Harmful to aquatic life with long lasting effects.</td>
</tr>
<tr>
<td>H413</td>
<td>May cause long lasting harmful effects to aquatic life.</td>
</tr>
</tbody>
</table>

Full text of abbreviated H statements:

- **H252**: Self-heating in large quantities; may catch fire.
- **H302**: Harmful if swallowed.
- **H317**: May cause an allergic skin reaction.
- **H319**: Causes serious eye irritation.
- **H332**: Harmful if inhaled.
- **H352**: May cause respiratory irritation.
- **H350**: May cause cancer.
- **H350i (inhalation)**: May cause cancer if inhaled.
- **H371 (lungs) (inhalation)**: May cause damage to organs if inhaled. (lungs)
- **H372 (lungs) (inhalation)**: Causes damage to organs through prolonged or repeated exposure if inhaled. (lungs)
- **H372**: Causes damage to organs through prolonged or repeated exposure.
- **H373 (lungs)**: May cause damage to organs through prolonged or repeated exposure. (lungs)
- **H411**: Toxic to aquatic life with long lasting effects.
- **H412**: Harmful to aquatic life with long lasting effects.
- **H413**: May cause long lasting harmful effects to aquatic life.

Full text of classifications [CLP/GHS]:

- **Acute Tox. 4, H302**: ACUTE TOXICITY (oral) - Category 4
- **Acute Tox. 4, H332**: ACUTE TOXICITY (inhalation) - Category 4
- **Aquatic Chronic 2, H411**: LONG-TERM AQUATIC HAZARD - Category 2
- **Aquatic Chronic 3, H412**: LONG-TERM AQUATIC HAZARD - Category 3
- **Aquatic Chronic 4, H413**: LONG-TERM AQUATIC HAZARD - Category 4
- **Carc. 1A, H350**: CARCINOGENICITY - Category 1A
- **Carc. 1A, H350i (inhalation)**: CARCINOGENICITY (inhalation) - Category 1A
- **Eye Irrit. 2, H319**: SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
- **Self-heat. 2, H252**: SELF-HEATING SUBSTANCES AND MIXTURES - Category 2
- **Skin Sens. 1, H317**: SKIN SENSITIZATION - Category 1
- **STOT RE 1, H372 (lungs) (inhalation)**: SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (lungs) (inhalation) - Category 1
- **STOT RE 1, H372**: SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
- **STOT RE 2, H373 (lungs) (inhalation)**: SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (lungs) (inhalation) - Category 2
- **STOT SE 2, H371 (lungs) (inhalation)**: SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (lungs) (inhalation) - Category 2
- **STOT SE 3, H335 (lungs) (inhalation)**: SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

Date of issue/ Date of revision: 22/03/2016

Date of previous issue: No previous validation.

Version: 1

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