

# SAFETY DATA SHEET



CO2 Filter Kit with 1/8 in Connections, Part Number CP17983

## 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** : CO2 Filter Kit with 1/8 in Connections, Part Number CP17983  
**Part No. (Kit)** : CP17983  
**Part No.** : Gas Clean Filter CO2 CP17969  
Gas Clean Filter Moisture CP17971

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

Identified uses	
Analytical chemistry.	
Gas Clean Filter CO2	1 x 200 ml
Gas Clean Filter Oxygen	1 x 200 ml

### 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** : Gas Clean Filter CO2 Mixture (encapsulated in article)  
Gas Clean Filter Moisture Mixture (encapsulated in article)

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

##### Gas Clean Filter CO2

H314 SKIN CORROSION/IRRITATION - Category 1  
H335 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3  
H412 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3

##### Gas Clean Filter Moisture

H350 CARCINOGENICITY - Category 1A

**Date of issue/Date of revision** : 31/05/2017

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## SECTION 2: Hazards identification

<b>Ingredients of unknown toxicity</b>	: Gas Clean Filter CO2	Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: > 60%
	Gas Clean Filter Moisture	Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: > 60%
		Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: > 60%
		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: > 60%
<b>Ingredients of unknown ecotoxicity</b>	: Gas Clean Filter Moisture	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 100%

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

**Hazard pictograms** : Gas Clean Filter CO2



Gas Clean Filter Moisture



**Signal word** : Gas Clean Filter CO2 Danger  
Gas Clean Filter Moisture Danger

**Hazard statements** : Gas Clean Filter CO2 H314 - Causes severe skin burns and eye damage.  
H335 - May cause respiratory irritation.  
Gas Clean Filter Moisture H412 - Harmful to aquatic life with long lasting effects.  
H350 - May cause cancer.

### Precautionary statements

**Prevention** : Gas Clean Filter CO2 P280 - Wear protective gloves. Wear protective clothing. Wear eye or face protection: Recommended: Tightly-fitting goggles.  
Gas Clean Filter Moisture P273 - Avoid release to the environment.  
P201 - Obtain special instructions before use.  
P280 - Wear protective gloves. Wear protective clothing. Wear eye or face protection.

**Response** : Gas Clean Filter CO2 P304 + P340 + P310 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician.  
P301 + P310 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.  
P303 + P361 + P353 + P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or physician.  
P305 + P310 - IF IN EYES: Immediately call a POISON CENTER or physician.  
Gas Clean Filter Moisture P308 + P313 - IF exposed or concerned: Get medical attention.

**Storage** : Gas Clean Filter CO2 P405 - Store locked up.  
Gas Clean Filter Moisture P405 - Store locked up.

**Disposal** : Gas Clean Filter CO2 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.

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## SECTION 2: Hazards identification

<b>Hazardous ingredients</b>	: Gas Clean Filter CO2	- Calcium dihydroxide - sodium hydroxide
	Gas Clean Filter Moisture	- crystalline silica, respirable powder - cristobalite
<b>Supplemental label elements</b>	: Gas Clean Filter CO2	Not applicable.
	Gas Clean Filter Moisture	Not applicable.
<b>Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</b>	: Gas Clean Filter CO2	Not applicable.
	Gas Clean Filter Moisture	Restricted to professional users.

### Special packaging requirements

<b>Tactile warning of danger</b>	: Gas Clean Filter CO2	Not applicable.
	Gas Clean Filter Moisture	Not applicable.

### 2.3 Other hazards

<b>Other hazards which do not result in classification</b>	: Gas Clean Filter CO2	Causes digestive tract burns.
	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.

<b>3.1 Substances</b>	: Gas Clean Filter CO2	Mixture (encapsulated in article)
	Gas Clean Filter Moisture	Mixture (encapsulated in article)

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
<b>Gas Clean Filter CO2</b> Calcium dihydroxide	EC: 215-137-3 CAS: 1305-62-0	≥75 - ≤90	Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Chronic 3, H412	[1] [2]
Sodium hydroxide	EC: 215-185-5 CAS: 1310-73-2 Index: 011-002-00-6	≤5	Skin Corr. 1A, H314	[1] [2]
<b>Gas Clean Filter Moisture</b> crystalline silica, respirable powder	EC: 238-878-4 CAS: 14808-60-7	<10	Carc. 1A, H350 STOT SE 2, H371 (lungs) (inhalation)	[1] [2]
cristobalite	EC: 238-455-4 CAS: 14464-46-1	<10	Carc. 1A, H350 STOT RE 2, H373 (lungs)	[1] [2]
			<b>See Section 16 for the full text of the H statements declared above.</b>	

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

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### SECTION 3: Composition/information on ingredients

- [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
- [6] Additional disclosure due to company policy

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

<b>Eye contact</b>	: Gas Clean Filter CO2	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.
	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.
<b>Inhalation</b>	: Gas Clean Filter CO2	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.
	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.
<b>Skin contact</b>	: Gas Clean Filter CO2	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.
	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.

## SECTION 4: First aid measures

<b>Ingestion</b>	: Gas Clean Filter CO2	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.
	Gas Clean Filter Moisture	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.
<b>Protection of first-aiders</b>	: Gas Clean Filter CO2	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.

### 4.2 Most important symptoms and effects, both acute and delayed

#### Potential acute health effects

<b>Eye contact</b>	: Gas Clean Filter CO2 Gas Clean Filter Moisture	Causes serious eye damage. No known significant effects or critical hazards.
<b>Inhalation</b>	: Gas Clean Filter CO2 Gas Clean Filter Moisture	May cause respiratory irritation. No known significant effects or critical hazards.
<b>Skin contact</b>	: Gas Clean Filter CO2 Gas Clean Filter Moisture	Causes severe burns. No known significant effects or critical hazards.
<b>Ingestion</b>	: Gas Clean Filter CO2 Gas Clean Filter Moisture	Corrosive to the digestive tract. Causes burns. No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

<b>Eye contact</b>	: Gas Clean Filter CO2	Adverse symptoms may include the following: pain watering redness
	Gas Clean Filter Moisture	No specific data.

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**SECTION 4: First aid measures**

<b>Inhalation</b>	: Gas Clean Filter CO2	Adverse symptoms may include the following: respiratory tract irritation coughing
	Gas Clean Filter Moisture	No specific data.
<b>Skin contact</b>	: Gas Clean Filter CO2	Adverse symptoms may include the following: pain or irritation redness blistering may occur
	Gas Clean Filter Moisture	No specific data.
<b>Ingestion</b>	: Gas Clean Filter CO2	Adverse symptoms may include the following: stomach pains
	Gas Clean Filter Moisture	No specific data.

**4.3 Indication of any immediate medical attention and special treatment needed**

<b>Notes to physician</b>	: Gas Clean Filter CO2	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Gas Clean Filter Moisture	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
<b>Specific treatments</b>	: Gas Clean Filter CO2	No specific treatment.
	Gas Clean Filter Moisture	No specific treatment.

**SECTION 5: Firefighting measures**

**5.1 Extinguishing media**

<b>Suitable extinguishing media</b>	: Gas Clean Filter CO2	Use an extinguishing agent suitable for the surrounding fire.
	Gas Clean Filter Moisture	Use an extinguishing agent suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	: Gas Clean Filter CO2	None known.
	Gas Clean Filter Moisture	None known.

**5.2 Special hazards arising from the substance or mixture**

<b>Hazards from the substance or mixture</b>	: Gas Clean Filter CO2	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.
	Gas Clean Filter Moisture	No specific fire or explosion hazard.
<b>Hazardous combustion products</b>	: Gas Clean Filter CO2	Decomposition products may include the following materials: metal oxide/oxides
	Gas Clean Filter Moisture	Decomposition products may include the following materials: metal oxide/oxides

**5.3 Advice for firefighters**

<b>Special precautions for fire-fighters</b>	: Gas Clean Filter CO2	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.
<b>Special protective equipment for fire-fighters</b>	: Gas Clean Filter CO2	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.
	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. Clothing for fire-fighters (including helmets, protective boots and gloves)



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## SECTION 5: Firefighting measures

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

<b>For non-emergency personnel</b>	: Gas Clean Filter CO2	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.
	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 spilt material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
<b>For emergency responders</b>	: Gas Clean Filter CO2	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".
	Gas Clean Filter Moisture	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

: Gas Clean Filter CO2	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.
Gas Clean Filter Moisture	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).

### 6.3 Methods and material for containment and cleaning up

<b>Methods for cleaning up</b>	: Gas Clean Filter CO2	Move containers from spill area. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. 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.

### 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.
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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

<b>Protective measures</b>	: Gas Clean Filter CO2	Put on appropriate personal protective equipment (see Section 8). 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.
	Gas Clean Filter Moisture	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.
<b>Advice on general occupational hygiene</b>	: Gas Clean Filter CO2	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.
	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.

### 7.2 Conditions for safe storage, including any incompatibilities

<b>Storage</b>	: Gas Clean Filter CO2	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. 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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

### Seveso Directive - Reporting thresholds (in tonnes)

### 7.3 Specific end use(s)



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## SECTION 7: Handling and storage

<b>Recommendations</b>	: Gas Clean Filter CO2	Industrial applications, Professional applications.
	Gas Clean Filter Moisture	Industrial applications, Professional applications.
<b>Industrial sector specific solutions</b>	: Gas Clean Filter CO2	Not applicable.
	Gas Clean Filter Moisture	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

Product/ingredient name	Exposure limit values
<b>Gas Clean Filter CO2</b> Calcium dihydroxide	<b>EH40/2005 WELs (United Kingdom (UK), 12/2011).</b> TWA: 5 mg/m <sup>3</sup> 8 hours.
Sodium hydroxide	<b>EH40/2005 WELs (United Kingdom (UK), 12/2011).</b> STEL: 2 mg/m <sup>3</sup> 15 minutes.
<b>Gas Clean Filter Moisture</b> crystalline silica, respirable powder	<b>EH40/2005 WELs (United Kingdom (UK), 12/2011).</b> TWA: 0.1 mg/m <sup>3</sup> 8 hours. Form: respirable dust
crystalite	<b>EH40/2005 WELs (United Kingdom (UK), 12/2011).</b> TWA: 0.1 mg/m <sup>3</sup> 8 hours. Form: respirable dust

**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** : Use only with adequate ventilation. 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.

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## SECTION 8: Exposure controls/personal protection

- 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.
- 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.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

<b>Physical state</b>	: Gas Clean Filter CO2 Gas Clean Filter Moisture	Solid. [Granular solid.] Solid. [Granular solid.]
<b>Colour</b>	: Gas Clean Filter CO2 Gas Clean Filter Moisture	White. Violet. Tan.
<b>Odour</b>	: Gas Clean Filter CO2 Gas Clean Filter Moisture	Characteristic. Not available.
<b>Odour threshold</b>	: Gas Clean Filter CO2 Gas Clean Filter Moisture	Not available. Not available.
<b>pH</b>	: Gas Clean Filter CO2 Gas Clean Filter Moisture	>12 [Conc. (% w/w): 0.14%] Not available.
<b>Melting point/freezing point</b>	: Gas Clean Filter CO2 Gas Clean Filter Moisture	Not available. Not available.
<b>Initial boiling point and boiling range</b>	: Gas Clean Filter CO2 Gas Clean Filter Moisture	Not available. Not available.
<b>Flash point</b>	: Gas Clean Filter CO2 Gas Clean Filter Moisture	Not available. Closed cup: >535°C

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## SECTION 9: Physical and chemical properties

<b>Evaporation rate</b>	: Gas Clean Filter CO2 Gas Clean Filter Moisture	Not available. Not available.
<b>Flammability (solid, gas)</b>	: Gas Clean Filter CO2 Gas Clean Filter Moisture	Not available. Not available.
<b>Upper/lower flammability or explosive limits</b>	: Gas Clean Filter CO2 Gas Clean Filter Moisture	Not available. Not available.
<b>Vapour pressure</b>	: Gas Clean Filter CO2 Gas Clean Filter Moisture	2.3 kPa [room temperature] Not available.
<b>Vapour density</b>	: Gas Clean Filter CO2 Gas Clean Filter Moisture	Not available. Not available.
<b>Relative density</b>	: Gas Clean Filter CO2 Gas Clean Filter Moisture	Not available. Not available.
<b>Solubility(ies)</b>	: Gas Clean Filter CO2  Gas Clean Filter Moisture	Insoluble in the following materials: cold water and hot water. Insoluble in the following materials: cold water and hot water.
<b>Partition coefficient: n-octanol/water</b>	: Gas Clean Filter CO2 Gas Clean Filter Moisture	Not available. Not available.
<b>Auto-ignition temperature</b>	: Gas Clean Filter CO2 Gas Clean Filter Moisture	Not available. Not available.
<b>Decomposition temperature</b>	: Gas Clean Filter CO2 Gas Clean Filter Moisture	Not available. Not available.
<b>Viscosity</b>	: Gas Clean Filter CO2 Gas Clean Filter Moisture	Not available. Not available.
<b>Explosive properties</b>	: Gas Clean Filter CO2 Gas Clean Filter Moisture	Not available. Not available.
<b>Oxidising properties</b>	: Gas Clean Filter CO2 Gas Clean Filter Moisture	Not available. Not available.

### 9.2 Other information

No additional information.

## SECTION 10: Stability and reactivity

<b>10.1 Reactivity</b>	: Gas Clean Filter CO2  Gas Clean Filter Moisture	No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	: Gas Clean Filter CO2 Gas Clean Filter Moisture	The product is stable. The product is stable.

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## SECTION 10: Stability and reactivity

- 10.3 Possibility of hazardous reactions** : Gas Clean Filter CO2 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.
- 10.4 Conditions to avoid** : Gas Clean Filter CO2 No specific data.  
Gas Clean Filter Moisture No specific data.
- 10.5 Incompatible materials** : Gas Clean Filter CO2 May react or be incompatible with oxidising materials.  
Gas Clean Filter Moisture May react or be incompatible with oxidising materials.
- 10.6 Hazardous decomposition products** : Gas Clean Filter CO2 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

### 11.1 Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Gas Clean Filter CO2 Calcium dihydroxide	LD50 Oral	Rat	7340 mg/kg	-

#### Acute toxicity estimates

Not available.

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Gas Clean Filter CO2 Calcium dihydroxide Sodium hydroxide	Eyes - Severe irritant	Rabbit	-	10 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 50 Micrograms	-
	Eyes - Severe irritant	Rabbit	-	1 Percent	-
	Eyes - Severe irritant	Rabbit	-	0.5 minutes 1 milligrams	-
	Skin - Severe irritant	Rabbit	-	24 hours 500 milligrams	-

#### Sensitiser

**Conclusion/Summary** : Not available.

**Skin** : May cause sensitisation by skin contact.

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

Product/ingredient name	Category	Route of exposure	Target organs
Gas Clean Filter CO2 Calcium dihydroxide	Category 3	Not applicable.	Respiratory tract irritation
Gas Clean Filter Moisture crystalline silica, respirable powder	Category 2	Inhalation	lungs

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

Product/ingredient name	Category	Route of exposure	Target organs
Gas Clean Filter Moisture cristobalite	Category 2	Not determined	lungs

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## SECTION 11: Toxicological information

### Aspiration hazard

Not available.

**Information on likely routes of exposure** : Gas Clean Filter CO2 Routes of entry anticipated: Oral, Dermal, Inhalation.  
Gas Clean Filter Moisture Routes of entry anticipated: Oral, Dermal, Inhalation.

### Potential acute health effects

**Inhalation** : Gas Clean Filter CO2 May cause respiratory irritation.  
Gas Clean Filter Moisture No known significant effects or critical hazards.

**Ingestion** : Gas Clean Filter CO2 Corrosive to the digestive tract. Causes burns.  
Gas Clean Filter Moisture No known significant effects or critical hazards.

**Skin contact** : Gas Clean Filter CO2 Causes severe burns.  
Gas Clean Filter Moisture No known significant effects or critical hazards.

**Eye contact** : Gas Clean Filter CO2 Causes serious eye damage.  
Gas Clean Filter Moisture No known significant effects or critical hazards.

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

**Inhalation** : Gas Clean Filter CO2 Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
Gas Clean Filter Moisture No specific data.

**Ingestion** : Gas Clean Filter CO2 Adverse symptoms may include the following:  
stomach pains  
Gas Clean Filter Moisture No specific data.

**Skin contact** : Gas Clean Filter CO2 Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur  
Gas Clean Filter Moisture No specific data.

**Eye contact** : Gas Clean Filter CO2 Adverse symptoms may include the following:  
pain  
watering  
redness  
Gas Clean Filter Moisture 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.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Potential chronic health effects

**General** : Gas Clean Filter CO2 No known significant effects or critical hazards.  
Gas Clean Filter Moisture No known significant effects or critical hazards.

**Carcinogenicity** : Gas Clean Filter CO2 No known significant effects or critical hazards.  
Gas Clean Filter Moisture May cause cancer. Risk of cancer depends on duration and level of exposure.

**Mutagenicity** : Gas Clean Filter CO2 No known significant effects or critical hazards.  
Gas Clean Filter Moisture No known significant effects or critical hazards.

**Teratogenicity** : Gas Clean Filter CO2 No known significant effects or critical hazards.  
Gas Clean Filter Moisture No known significant effects or critical hazards.

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- Developmental effects** : Gas Clean Filter CO2 No known significant effects or critical hazards.  
 Gas Clean Filter Moisture No known significant effects or critical hazards.
- Fertility effects** : Gas Clean Filter CO2 No known significant effects or critical hazards.  
 Gas Clean Filter Moisture No known significant effects or critical hazards.

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
<b>Gas Clean Filter CO2</b>			
Calcium dihydroxide	Acute LC50 33884.4 µg/l Fresh water	Fish - Clarias gariepinus - Fingerling	96 hours
Sodium hydroxide	Acute EC50 40.38 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute LC50 125 ppm Fresh water	Fish - Gambusia affinis - Adult	96 hours

### 12.2 Persistence and degradability

Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
<b>Gas Clean Filter CO2</b>			
Sodium hydroxide	-	-	Readily

### 12.3 Bioaccumulative potential

Not available.

### 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

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

#### Packaging

- Methods of disposal** : 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.



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## SECTION 13: Disposal considerations

**Special precautions** : 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.

**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**

**Annex XIV**

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** : Gas Clean Filter CO2 Not applicable.  
Gas Clean Filter Moisture Restricted to professional users.

**Other EU regulations**

**Ozone depleting substances (1005/2009/EU)**

Not listed.

**Prior Informed Consent (PIC) (649/2012/EU)**

Not listed.

**Seveso Directive**

This product is not controlled under the Seveso Directive.

**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.

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## SECTION 15: Regulatory information

### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

<b>Australia</b>	: All components are listed or exempted.
<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. <b>Japan inventory (ISHL)</b> : All components are listed or exempted.
<b>Malaysia</b>	: All components are listed or exempted.
<b>New Zealand</b>	: Not determined.
<b>Philippines</b>	: Not determined.
<b>Republic of Korea</b>	: Not determined.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: All components are listed or exempted.
<b>Viet Nam</b>	: 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]

Classification	Justification
<b>Gas Clean Filter CO2</b> Skin Corr. 1, H314 STOT SE 3, H335 Aquatic Chronic 3, H412	On basis of test data Calculation method Calculation method
<b>Gas Clean Filter Moisture</b> Carc. 1A, H350	Calculation method

### Full text of abbreviated H statements

<b>Gas Clean Filter CO2</b> H314 H315 H318 H335 H412	Causes severe skin burns and eye damage. Causes skin irritation. Causes serious eye damage. May cause respiratory irritation. Harmful to aquatic life with long lasting effects.
<b>Gas Clean Filter Moisture</b> H350 H371 (inhalation) H373	May cause cancer. May cause damage to organs if inhaled. May cause damage to organs through prolonged or repeated

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## SECTION 16: Other information

exposure.

### [Full text of classifications \[CLP/GHS\]](#)

<b>Gas Clean Filter CO2</b> Aquatic Chronic 3, H412 Eye Dam. 1, H318 Skin Corr. 1, H314 Skin Corr. 1A, H314 Skin Irrit. 2, H315 STOT SE 3, H335	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 SKIN CORROSION/IRRITATION - Category 1 SKIN CORROSION/IRRITATION - Category 1A SKIN CORROSION/IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3
<b>Gas Clean Filter Moisture</b> Carc. 1A, H350 STOT RE 2, H373  STOT SE 2, H371 (inhalation)	CARCINOGENICITY - Category 1A SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (inhalation) - Category 2

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**Date of previous issue** : No previous validation.

**Version** : 1

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