

# BROUWLAND



## Safety data sheet 058.040.3 CO2 cartridges 16 g

### Responsible distributor:

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### 1 Designation of material/mixture and company description

#### Product identifier

**Trading name** : Carbon dioxide

**Safety datasheet no.** :

**Chemical description of gas** : Carbon dioxide  
CAS-No.: 000124-38-9  
EC no. :204-696-9  
Index no.: --

**Chemical formula** : CO2

**Usage** : Preparation of foods and for industrial use.  
Carry out risk assessment before industrial use.

### 2 Possible risks

#### Categorization of material or mixture

**Risk class and category in accordance with EC 1272/2008 (CLP)** : Capsules are exempted from EC 1272/2008, Section 1, Paragraph 5e, as a food additive.

**Classification in accordance with EC 1907/2006** : Soda capsules are classified as a food or food additive in accordance with EC 178/2002 and fulfill all the specifications set out therein. These products set out in Title I/Chapter I/Section 2/Paragraph 5b and 6d of EC 178/2002 are exempted from this ordinance.

• **Hazard warnings** : H280: Contains gas under pressure; can explode if overheated.

• **Safety instructions** : P102: Keep out of reach of children.  
P403: Keep in a well ventilated place.  
P410: Protect from direct sunlight.

#### Other hazards

**Other hazards** : Can cause asphyxiation in high concentrations.

### 3 Composition/Information on components

**Material/Composition** : **Material**

Designation of material	Content	CAS no.	EC no.	Index no.	Registration no.	Classification
Carbon dioxide	100%	124-38-9	204-696-9	----	NOTE 1	Liq. gas (H280)

Does not contain any other components or impurities which could affect the classification of this product. Notes:  
Listed in Appendix IV/V REACH, exempt from registration.  
For full text of R-sets, see Section 16.

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## 4 First aid

- **Inhalation** : High concentrations can cause asphyxiation. Symptoms can include loss of mobility and consciousness. The victim does not notice the asphyxiation. Low concentration of CO<sub>2</sub> can cause accelerated breathing and headaches. The victim should be made to wear respiratory equipment and brought into fresh air. Keep them warm and calm. Consult a doctor. Attempt artificial respiration if the victim stops breathing.
- **Contact with skin or eyes** : Rinse the eyes immediately in water for at least 15 minutes. Rinse any cold burns immediately in water for at least 15 minutes. Cover with a sterile dressing. Consult a doctor.
- **Ingestion** : Ingestion is not seen as a possible method of exposure.

## 5 Fire-fighting measures

- Specific risks** : The effect of fire can cause the container to burst/explode.
- Hazardous combustion products** : None.
- Extinguishing agent** : All normal extinguishing agents can be used.
- **Suitable extinguishing agent** : If possible, stop gas leakage.
- Specific methods** : Move away from the container and cool with water from a safe position.
- Special protective gear for the fire department** : Use respiratory equipment in confined spaces.

## 6 Measures if released accidentally

- Personnel-related precautions** : Ensure adequate ventilation. Use respiratory gear to enter the area unless the atmosphere can be proven to be safe.
- Environmental protection** : Attempt to stop the gas leak. Prevent entry into sewer systems, basements, pits or other areas where accumulation could be hazardous.
- Cleaning methods** : Ventilate the area.

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## 7 Handling and storage

- Handling** : Prevent ingress of water into the gas container.  
Prevent back-flow into the gas container.  
Only use equipment suitable for this product and the pressure and temperature specified. In case of doubt, consult the gas supplier.  
Follow the instructions of the gas supplier.
- Storage** : Store the containers in a well ventilated place at less than 50°C.

## 8 Restricting and monitoring of exposure/personal protective gear

- Personal protective gear** : Ensure adequate ventilation.
- Workplace limit** : Carbon dioxide: ILV (EC) - 8 H - [mg/m<sup>3</sup>] : 9000  
Carbon dioxide: ILV (EC) - 8 H - [ppm] : 5000  
Carbon dioxide: TLV© -TWA [ppm] : 5000  
Carbon dioxide: TLV© -TWA [ppm] : 5000  
Carbon dioxide: TLV© -STEL [ppm] : 30000  
Carbon dioxide: TLV© -STEL [ppm] : 30000

## 9 Physical and chemical characteristics

- Physical state at 20 °C** : Gas.
- Color** : Colorless.
- Smell** : Odorless, so no warning signs.
- Molecular weight** : 44
- Melting point [°C]** : -56.6
- Boiling point [°C]** : -78.5 (s)
- Critical temperature [°C]** : 31
- Vapor pressure [20°C]** : 57.3 bar
- Relative density, gas (air=1)** : 1.52
- Relative density, liquid (water=1)** : 0.82
- Solubility in water [mg/l]** : 2000
- Flash point [Vol.% in air]** : Non-flammable.
- Other information** : Gas/vapors are heavier than air. They can accumulate in confined spaces, especially at floor level or in lower-level areas.

## 10 Stability and reactivity

- Hazardous decomposition products** : None.
- Incompatible materials** : Stable under normal conditions.

## 11 Information on toxicology

- Toxicological information** : There are no known toxic effects of the product.

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## 12 Environmental information

**Environment-specific information** : Can contribute to the greenhouse effect if large quantities are emitted.  
**Greenhouse potential [CO2=1]** : 1

## 13 Notes on disposal

**General** : Do not allow to flow into sewers, basements, pits and similar places where the accumulation of gas could be hazardous.  
Release into the atmosphere in a well ventilated place.  
Avoid releasing large quantities into the atmosphere.  
Consult your gas supplier if you require advice.

## 14 Notes on transport

### Land transport

**UN number** : 1013  
**Ordinary UN** : CARBON DIOXIDE  
**Shipping name**  
**ADR/RID classification code** : 2 A

**Special regulation 584** : This gas is not subject to the regulations of the ADR if it contains a maximum of 0.5% air in a gaseous state, if it is contained in metallic capsules (Sodors, Sparklets) which are free of faults which could impact their rigidity, if the capsule seal is leak-proof and if the capsule contains a maximum of 25 g and a maximum of 0.75 g of this gas per cm<sup>3</sup> (=0.75 kg/l).

**Labeling and shipping papers** : For capsules with a maximum content of 25g (max. 33 ml volume at FF 0.75 kg/l), no labeling of the transport packaging is required on the **shipping papers**. No UN number is required either. No special shipping papers are required.

### Transport by ship

**UN number** : 2037  
**GGVSee/IMO-IMDG code** : Containers, small, with gas (gas cartridges), with no removal device, non-refillable

**Designation of material**  
**ADR/RID classification code** : 2 A

**Special regulation 191** : This gas is not subject to the IMDG regulations if it is transported in packages with a maximum capacity of 50 ml in accordance with UN2037.  
No special regulations.

**Labeling and Shipping papers** : For capsules with a maximum volume of 50 ml and shipped in accordance with UN2037 do not require labeling (no UN number either) on the transport packaging or any special shipping papers.

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## 14 Notes on transport (continued)

### Air transport

**UN number** : 1013  
**Ordinary UN shipping name** : CARBON DIOXIDE  
**ADR/RID classification code** : 2 A

The following regulations are from the IATA 52 regulations on hazardous goods valid for 2011. According to the list of hazardous goods in Section 4 of the regulations, all gases listed under Item 2 may be transported as hazardous goods in the quantities approved on cargo planes. The alphanumeric code E1 in column F defines the maximum net quantity per internal packaging as set out in table 2.6 A of the IATA. This can be 30 g/30 ml. The net quantity is defined as the water capacity of the internal container (cylinder). The maximum net quantity that can be contained in an outer box as a single unit is 1000 ml.

## 15 Legal regulations

**Health and safety regulations health and environmental legal regulations for the material or the mixture** : All national/local regulations apply.

**Seveso regulations 96/82/EC** : Not listed.

## 16 Other information

Can cause asphyxiation in high concentrations.  
Keep container in a well ventilated place.  
Do not inhale gas.  
Contact with liquid can cause cold burns/frost bite.  
The risk of asphyxiation is often overlooked and must be made clear when training employees.  
This safety data-sheet has been produced in accordance with valid European directives.  
It applies to all countries which have adopted these directives as part of their national legislation.

**WAIVER OF LIABILITY** : It is based on the latest knowledge.  
The information contained in this document does not constitute a contractual assurance of product qualities. Before the product can be used in any new process or trial, careful tests of the material compliance and safety should be carried out.

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