


|   |                         |                           |
|---|-------------------------|---------------------------|
|  | <b>SAFETY DATASHEET</b> | Page : 1/10               |
|   |                         | Revised edition n° : 10.0 |
|   |                         | Revision date : 10/2023   |
| <b>Carbon dioxide 0.5 % - Oxygen 20.9% - Nitrogen</b>                             |                         | <b>MTGXXX</b>             |

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

### 1.1. Product identifier

|                      |  |
|----------------------|--|
| Trade name           | Carbon dioxide 0.5% - Oxygen 20.9% - Nitrogen            |
| Chemical description | Carbon dioxide 0.5% - Oxygen 20.9% - Nitrogen            |
| CAS N°               | -  |
| CE N°                | -  |
| Index N°             | -  |
| Registration n°      | Listed in Annex IV / V REACH, exempted from registration |
| Chemical formula     | N <sub>2</sub> , O <sub>2</sub> , CO <sub>2</sub>        |

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

|                          |  |
|--------------------------|--|
| Relevant identified uses | Industrial and professional<br>Chemical analysis, calibration, quality control (routine)<br>Laboratory use |
| Uses advised against     | For use by industrial or professional users only   |

### 1.3. Details of the supplier of the safety data sheet

|                        |   |
|------------------------|---|
| Company identification | MULTIGAS<br>Route de l'Industrie 102<br>CH-1564 Domdidier |
| Phone number           | +41 (0) 26 676 94 94                                      |
| E-mail address         | <a href="mailto:info@multigas.ch">info@multigas.ch</a>    |

### 1.4. Emergency telephone numbers

145 (Toxicology Centre Zurich) or +41 (0) 44 251 51 51  
+41 (0) 26 676 94 94 (Multigas)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

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

Gases under pressure : Compressed gas

H280

For the complete H-sentences texts mentioned in that chapter, refer to Section 16

**Carbon dioxide 0.5 % - Oxygen 20.9% - Nitrogen**
**MTGXXX**
**2.2. Label elements**

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

**Hazard pictograms**


GHS04

**Signal word**

Warning

**Hazard statements**

H280 Contains gas under pressure; may explode if heated

**Precautionary statements**

P410+403 Protect from solar radiation. Store in a well-ventilated place

**2.3. Other hazards**

Asphyxiant in high concentrations

**SECTION 3: Composition/information on ingredients**
**3.1. Substances**

| Name           | Product identifier  | Concentration | Classification                              |
|----------------|---|---------------|---|
| Nitrogen       | (CAS-No.) 7727-37-9<br>(EC-No.) 231-783-9<br>(EC Index-No.) ---<br>(Registration-No.) --          | 78.6%         | Press. Gas (Comp.), H280                    |
| Oxygen         | (CAS-No.) 7782-44-7<br>(EC-No.) 231-956-9<br>(EC Index-No.) 008-001-00-8<br>(Registration-No.) -- | 20.9%         | Ox. Gas 1, H270<br>Press. Gas (Comp.), H280 |
| Carbon dioxide | (CAS-No.) 124-38-9<br>(EC-No.) 204-696-9<br>(EC Index-No.) ---<br>(Registration-No.) --           | 0.5%          | Press. Gas (Liq.), H280                     |

For the complete H-sentences texts mentioned in that chapter, refer to Section 16

Contains no other components or impurities which will influence the classification of the product

**Carbon dioxide 0.5 % - Oxygen 20.9% - Nitrogen**

**MTGXXX**

**3.2. Mixtures**

Not established

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

|                                |   |
|--------------------------------|---|
| <b>General advices</b>         | See a doctor. Show this safety data sheet to the attending physician  |
| <b>In case of inhalation</b>   | In case of inhalation, remove the person from the contaminated area. In case of respiratory arrest, give artificial respiration. See a doctor |
| <b>In case of skin contact</b> | No adverse effects expected   |
| <b>In case of eyes contact</b> | No adverse effects expected   |
| <b>In case of ingestion</b>    | Ingestion is not considered a likely route of exposure  |

**4.2. Most important symptoms and effects, both acute and delayed**

In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation  
Refer to section 11

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

Data not available

**SECTION 5: Firefighting measures**

**5.1. Extinguishing media**

|                                       |  |
|---------------------------------------|--|
| <b>Suitable extinguishing media</b>   | The product alone does not burn<br>Water spray or water mist. Dry powder. Foam |
| <b>Unsuitable extinguishing media</b> | Do not use water jet   |

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

|                                      |  |
|--------------------------------------|--|
| <b>Specific hazards</b>              | Exposure to fire may cause containers to rupture/explode |
| <b>Hazardous combustion products</b> | None   |

**5.3. Additional information**

Cool endangered receptacles with water spray jet from a protected position

**Carbon dioxide 0.5 % - Oxygen 20.9% - Nitrogen**

**MTGXXX**

**SECTION 6: Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

Avoid breathing vapours, spray mists or gases  
 Provide adequate ventilation  
 Evacuate the staff to safe place  
 Personal protective equipment, see section 8

**6.2. Environmental precautions**

-

**6.3. Methods and material for containment and cleaning up**

-

**6.4. Reference to other sections**

See also sections 8 and 13

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

See also sections 8 and 13

**7.2. Conditions for safe storage, including any incompatibilities**

Store in a cool place. Keep container tightly closed in a dry and well-ventilated place.  
 Pressurized contents

**7.3. Specific end use(s)**

-

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

Components with occupational exposure limits

| Component | CAS N°    | Exposure value type | Value | Source                               |
|-----------|-----------|---------------------|-------|--------------------------------------|
| Nitrogen  | 7727-37-9 | TWA                 | -     | No occupational exposure limit value |
|           |           |                     | -     |                                      |
|           |           | OEL                 | -     |                                      |
|           |           |                     | -     |                                      |



**Carbon dioxide 0.5 % - Oxygen 20.9% - Nitrogen**
**MTGXXX**

|   |                         |
|---|-------------------------|
| Flash point                                     | Data not available      |
| Evaporation rate                                | Data not available      |
| Flammability (solid, gas)                       | Non-flammable           |
| Explosive limits                                | Data not available      |
| Vapour pressure [20°C]                          | Data not available      |
| Vapour pressure [50°C]                          | Data not available      |
| Vapour density                                  | Data not available      |
| Relative density, liquid (water=1)              | 2.486 g/cm <sup>3</sup> |
| Relative density, gas (air=1)                   | 0.9985                  |
| Water solubility                                | Data not available      |
| Partition coefficient n-octanol/water (Log Kow) | Data not available      |
| Auto-ignition temperature                       | Data not available      |
| Decomposition temperature                       | Data not available      |
| Viscosity                                       | Data not available      |
| Explosive properties                            | Data not available      |
| Oxidising properties                            | Data not available      |

**9.2. Other information**

|                           |                    |
|---------------------------|--------------------|
| Molar mass                | 28.92 g/mol        |
| Critical temperature [°C] | Data not available |

**SECTION 10: Stability and reactivity**
**10.1. Reactivity**

No hazards related to reactivity other than those described in the following subparagraphs

**10.2. Chemical stability**

Stable under the recommended storage conditions

**10.3. Possibility of hazardous reactions**

Data not available

**10.4. Conditions to avoid**

Data not available

**Carbon dioxide 0.5 % - Oxygen 20.9% - Nitrogen**
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**10.5. Incompatible materials**

No reaction with any common materials in dry or wet conditions  
 For additional information on compatibility refer to ISO 11114 standard

**10.6. Hazardous decomposition products**

Under normal conditions of storage and use, hazardous decomposition products should not be produced  
 Hazardous decomposition products are formed in case of fire. Nitrogen oxides (NO<sub>x</sub>)

**SECTION 11: Toxicological information**
**11.1. Chemical safety assessment**

|  |                    |
|--|--------------------|
| Acute toxicity                         | Data not available |
| Skin corrosion/irritation              | Data not available |
| Serious eye damage/irritation          | Data not available |
| Respiratory or skin sensitisation      | Data not available |
| Germ cell mutagenicity                 | Data not available |
| Carcinogenicity                        | Data not available |
| Reproductive toxicity                  | Data not available |
| STOT-single exposure – Target organ(s) | Data not available |
| STOT-repeated exposure                 | Data not available |
| Aspiration hazard                      | Data not available |

**11.2. Information on other hazards**

The substance or mixture does not exhibit endocrine disrupting properties

**SECTION 12: Ecological information**
**12.1. Toxicity**

|            |                    |
|------------|--------------------|
| Assessment | Data not available |
|------------|--------------------|

**12.2. Persistence and degradability**

Data not available

**12.3. Bioaccumulative potential**

Data not available

**Carbon dioxide 0.5 % - Oxygen 20.9% - Nitrogen**
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**12.4. Mobility in soil**

Data not available

**12.5. Results of PBT and vPvB assessment**

No data available. PBT / vPvB assessment is not available as chemical safety assessment is not required / not conducted

**12.6. Endocrine disrupting properties**

The substance or mixture does not exhibit endocrine disrupting properties

**12.7. Other adverse effects**

Effect on the ozone layer: No known effect of the product

Ozone-depleting potential: None.

Effect on global warming: May contribute to the greenhouse effect if released in large quantities

Global warming potential: Components Carbon dioxide: 1

**SECTION 13: Disposal considerations**
**13.1. Waste treatment methods**
**Product**

May be vented to atmosphere in a well-ventilated place

Do not discharge into any place where its accumulation could be dangerous

Return unused product in original cylinder to supplier

**Contaminated container**

-

**OMoD Code**

16 05 05

Gases in pressure containers other than those mentioned in 16 05 04.

**SECTION 14: Transport information**
**14.1. UN number**

| Transport par road/rail<br>ADR / RID | Transport by sea<br>IMDG | Transport by air<br>IATA |
|--------------------------------------|--------------------------|--------------------------|
| 1956                                 | 1956                     | 1956                     |

**14.2. UN proper shipping name**

| Transport par road/rail<br>ADR / RID                  | Transport by sea<br>IMDG                              | Transport by air<br>IATA                              |
|---|---|---|
| COMPRESSED GAS, N.O.S.,<br>(Nitrogen, Carbon dioxide) | COMPRESSED GAS, N.O.S.,<br>(Nitrogen, Carbon dioxide) | COMPRESSED GAS, N.O.S.,<br>(Nitrogen, Carbon dioxide) |



**Carbon dioxide 0.5 % - Oxygen 20.9% - Nitrogen**

**MTGXXX**

**14.3. Transport hazard class(es)**

Labelling



ADR/RID  
 IMDG  
 IATA

2.2 : Non-flammable, non-toxic gases

**14.4. Packing group**

ADR/RID  
 IMDG  
 IATA

-

**14.5. Environmental hazards**

|                    |    |
|--------------------|----|
| ADR/RID            | No |
| IMDG               | No |
| ICAO-TI / IATA-DGR | No |

**14.6. Special precautions for user**

Data not available

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

Not applicable

**SECTION 15: Regulatory information**

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

This safety data sheet complies with the requirements of Regulation (CE) No. 1907/2006

**15.2. Chemical safety assessment**

A CSA does not need to be carried out for this product


**SECTION 16: Other information**

**Indication of changes**

Revised safety data sheet in accordance with commission regulation (EU) No 2015/830

**Abbreviations and acronyms**

ADR : European Agreement concerning the International Carriage of Dangerous Goods by Road  
 CAS : Chemical Abstract Service number (USA)

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|             |   |
|-------------|---|
| CLP :       | Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008                       |
| CSA :       | Chemical Safety Assessment  |
| EIGA :      | European Industrial Gases Association   |
| EINECS :    | European Inventory of Existing Commercial Chemical Substances                                     |
| EN :        | European Standard   |
| ATE :       | Acute Toxicity Estimate   |
| IATA :      | International Air Transport Association   |
| IMDG Code : | International Maritime Dangerous Goods Code   |
| LC50 :      | Lethal Concentration to 50 % of a test population   |
| OMoD :      | Swiss Ordinance on the movement of waste  |
| PBT :       | Persistent, Bioaccumulative and Toxic   |
| PPE:        | Personal Protection Equipment   |
| REACH :     | Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006 |
| RID :       | Regulations concerning the international carriage of dangerous goods by rail                      |
| RMM :       | Risk Management Measures  |
| STOT-SE :   | Specific Target Organ Toxicity - Single Exposure  |
| UN :        | United Nations  |
| vPvB :      | Very Persistent and Very Bioaccumulative  |
| WGK:        | Water Hazards Class   |

### Full text of H, EUH and P statements used in sections 2 and 3

#### Hazard statements

H280                      Contains gas under pressure; may explode if heated

#### Precautionary statements

P410+403                Protect from solar radiation. Store in a well-ventilated place

#### Disclaimer of liability

Details given in this document have been prepared based on the most available reliable documents and are believed to be correct at the time of going to press

They do not claim to be exhaustive and should be considered as a guide