

Carbon dioxide extinguisher

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

1.1 - Product identifier

Trade name/designation Carbon dioxide extinguisher

Chemical name

Product-type Mixture

Product code CO2 2kg ; CO2 5kg ; CO2 9 kg ; CO2 2 x 9 kg ; CO2 20 kg ; CO2 45 kg ; K2 ; K5 ; CO2 2/2D ; CO2 5/5D ; HS2C ; HS5C N° de fiche :

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

Relevant identified uses

- Fire extinguishing, fireplaces B

Uses advised against

- Refer to the instructions on the unit.

1.3 - Details of the supplier of the safety data sheet

USINES DESAUTEL

5 Boulevard du Maréchal de Lattre de Tassigny

69330 Meyzieu

Telephone : 04.72.45.06.06 Fax 04.72.02.73.95 Website <https://www.desautel.fr>

sécurité Contact: 04.72.45.06.06 info.meyzieu@desautel.fr

1.4 - Emergency telephone number

- ORFILA (INRS) + 33 (0)1 45 42 59 59 France

SECTION 2: Hazards identification

2.1 - Classification of the substance or mixture

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

Gaz liquéfié

Liquefied gas

2.2 - Label elements

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

Signal word : Warning

Hazard pictograms



Hazard statements

H280

Contains gas under pressure; may explode if heated

Precautionary statements

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P410+P403	Protect from sunlight. Store in a well-ventilated place.
EUH-phrases	: None

2.3 - Other hazards

<u>PBT-substance.</u>	- The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.
<u>vPvB-substance.</u>	- The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.
<u>Other hazards which do not result in classification</u>	- No information available.

SECTION 3: Composition / information on ingredients

- not applicable

3.1 - Substances

Not applicable

- not applicable

3.2 - Mixtures

Chemical name	No	%	Class	Spec. concentrations
carbon dioxide	CAS No. : 124-38-9 Index No. : EC No. : 204-696-9	>= 75 - < 100	Gaz liquéfié - H280	Not applicable

SECTION 4: First aid measures

4.1 - Description of first aid measures

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Following inhalation

- Provide fresh air.
- Put victim at rest, cover with a blanket and keep warm.
- Seek medical advice immediately.

Following skin contact

- In case of frostbite, wash with plenty of water; do not remove clothing.
- Wash immediately with: Water
- When in doubt or if symptoms are observed, get medical advice.

After eye contact

- Rinse immediately carefully and thoroughly with eye-bath or water.
- In case of eye irritation consult an ophthalmologist.

After ingestion

- Rinse mouth thoroughly with water.
- Do NOT induce vomiting.

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

Symptoms and effects - Following inhalation

- In high concentration the gas may cause a suffocation. Victim may not be aware of asphyxiation.

Symptoms and effects - Following skin contact

- No information available.

Symptoms and effects - After eye contact

- No information available.

Symptoms and effects - After ingestion

- No information available.

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

- No information available.

SECTION 5: Firefighting measures

5.1 - Extinguishing media

Suitable extinguishing media

- Water spray

Unsuitable extinguishing media

- Full water jet

5.2 - Special hazards arising from the substance or mixture

Special hazards arising from the substance or

- Pressurised container: May burst if heated.

Carbon dioxide extinguisher

mixture

Hazardous decomposition products

- No information available.

5.3 - Advice for firefighters

- Co-ordinate fire-fighting measures to the fire surroundings.
- Move containers away from the fire area, if this can be done without risk. Use extinguishing media appropriate to the surrounding fire. Exposure to fire and heat can cause the gas containers to rupture. Cool exposed containers with water sprayed from a protected area. Do not allow water to drain into the gutters used in emergencies. If possible, stop the gas flow.

Use spray or cloud water to lower the fumes to the ground if possible

- In case of fire: Wear self-contained breathing apparatus.
- Wear a self-contained breathing apparatus and chemical protective clothing.
- Container device with compressed air (DIN EN 137)
- Norm EN 469: protective clothing for firefighters. Norm EN 659: Protective gloves for firefighters

SECTION 6: Accidental release measures

6.1 - Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

- Use personal protection equipment.
- Provide adequate ventilation.
- Try to stop the leak.
- Remove persons to safety.
- Wear breathing apparatus if exposed to vapours/dusts/aerosols.
- Do not allow run-off from fire-fighting to enter drains or watercourses.
- Act according to the local emergency plan.

For emergency responders

- No information available.

6.2 - Environmental precautions

- In case of fire: Stop leak if safe to do so.

6.3 - Methods and material for containment and cleaning up

Methods and material for containment

- Ventilate affected area.

Methods and material for cleaning up

- Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
- Wash with plenty of water.

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Inappropriate techniques

- No information available.

6.4 - Reference to other sections

- Disposal: see section 13
- Personal protection equipment: see section 8

SECTION 7: Handling and storage

7.1 - Precautions for safe handling

Recommendation

- The fire extinguisher is a pressure vessel that must only be opened by qualified personnel.
- Maintenance operations must be performed by qualified and entitled personnel.
- Before dismantling the unit, always check the absence of internal pressure, do not position your head above the fire extinguisher. Recover the used fire extinguishing charge for destruction by an approved die.
- Spare parts used in maintenance must conform to the certified model.

Advices on general occupational hygiene

- Used working clothes should not be worn outside the work area.
- When using do not eat, drink, smoke, sniff.
- Wash hands before breaks and after work.

7.2 - Conditions for safe storage, including any incompatibilities

- Store in a place accessible by authorized persons only.

7.3 - Specific end use(s)

- Fire extinguishing agent

SECTION 8: Exposure controls/personal protection

8.1 - Control parameters

8.2 - Exposure controls

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Appropriate engineering controls

- No information available.

Individual protection measures, such as personal protective equipment

- Consumer uses: Private households (= general public = consumers)
- No special measures are necessary.
- According to experience this refers to the following tasks:
Maintenance and service
- Protective gloves



- Eye protection



Environmental exposure controls

- Further information: see technical data sheet.

SECTION 9: Physical and chemical properties

9.1 - Information on basic physical and chemical properties

<u>Physical state</u>	Solid	<u>Appearance</u>	liquefied gas
<u>Colour</u>	colourless	<u>Odour</u>	odourless
Odour threshold		No data available	
pH		not applicable	
Melting point		-78,5 °C	
Freezing point		No data available	
Boiling point		-56,6 °C not determined	
Flash point		not applicable	
Evaporation rate		No data available	
flammability		No data available	
Lower explosion limit		No data available	
Upper explosion limit		No data available	
Vapour pressure		57,3 bar	
Vapour density		1,52	

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Relative density	0,82
Density	No data available
Solubility (Water)	No data available
Solubility (Ethanol)	No data available
Solubility (Acetone)	No data available
Solubility (Organic solvents)	No data available
Log KOC	0,83
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Kinematic viscosity	No data available
Dynamic viscosity	No data available
9.2 - Other information	
VOC content	not determined
Minimum ignition energy	not determined
Conductivity	not determined

SECTION 10: Stability and reactivity

10.1 - Reactivity

- This material is considered to be non-reactive under normal use conditions.

10.2 - Chemical stability

- The product is chemically stable under recommended conditions of storage, use and temperature.

10.3 - Possibility of hazardous reactions

- No hazardous reaction when handled and stored according to provisions.

10.4 - Conditions to avoid

- No information available.

10.5 - Incompatible materials

- No information available.

10.6 - Hazardous decomposition products

- Does not decompose when used for intended uses.

SECTION 11: Toxicological information

11.1 - Information on toxicological effects

Acute toxicity - Not classified

Toxicity : Mixture

LD50 oral (rat)	No data available
LD50 dermal (rat)	No data available

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LD50 dermal (rabbit)	No data available
LC50 inhalation (rat)	No data available
LC50 inhalation dusts and mists (rat)	No data available
LC50 inhalation vapours (rat)	No data available

- In high concentrations, quickly causes circulatory failure. Symptoms are headaches, nausea and vomiting, which can lead to unconsciousness. Unlike only asphyxiating substances, carbon dioxide can cause death, even when the oxygen content is normal (20-21%). It has been found that at a content of 5%, CO₂ can lead to an increase in the toxicity of other gases (CO, NO₂). It has been shown that CO₂ increases carboxy hemoglobin production or binds to hemoglobin, probably due to CO₂ stimulating effects on the respiratory system and in the circulatory system.

Skin corrosion/irritation - Not classified

Serious eye damage/eye irritation - Not classified

Respiratory or skin sensitisation - Not classified

Germ cell mutagenicity - Not classified

Carcinogenicity - Not classified

Reproductive toxicity - Not classified

STOT-single exposure - Not classified

STOT-repeated exposure - Not classified

Aspiration hazard - Not classified

SECTION 12: Ecological information

12.1 - Toxicity

Toxicity : Mixture

EC50 48 hr crustacea	No data available
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LC50 96 hr fish	No data available
ErC50 algae	No data available
ErC50 other aquatic plants	No data available
NOEC chronic fish	No data available
NOEC chronic crustacea	No data available
NOEC chronic algae	No data available
NOEC chronic other aquatic plants	No data available

- The substance/mixture does not fulfill the criteria of the acute aquatic toxicity according to Regulation (EC) No1272/2008 [CLP], Annex I.

12.2 - Persistence and degradability

Biochemical oxygen demand (BOD)	No data available
Chemical oxygen demand (COD)	No data available
% of biodegradation in 28 days	No data available

- No information available.

12.3 - Bioaccumulative potential

Bioconcentration factor (BCF)	No data available
Log KOC	0,83

- No indication of bioaccumulation potential.

12.4 - Mobility in soil

- No information available.

12.5 - Results of PBT and vPvB assessment

- The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

- The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.7 - Other adverse effects

- Contains one or more greenhouse gases, not subject to Regulation (EC) 842/2006 May contribute to the greenhouse effect when discharged in large quantities

SECTION 13: Disposal considerations

13.1 - Waste treatment methods

Waste treatment methods

- Dispose of waste according to applicable legislation.
- 16 05 05 :
- gases in pressure containers other than those mentioned in 16 05 04

Sewage disposal

- Do not allow run-off from fire-fighting to enter drains or water courses.
- Do not allow to enter into surface water or drains.

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Special precautions for waste treatment : - Recover the used fire extinguishing charge for destruction by an approved die.

Community or national or regional provisions : - Dispose according to legislation.

SECTION 14: Transport information

14.1 - UN number

UN number (ADR) : UN1044

UN number (RID) : UN1044

UN number (ADN) : UN1044

UN number (IMDG) : UN1044

UN number (IATA) : UN1044

14.2 - UN proper shipping name

UN proper shipping name (ADR) : FIRE EXTINGUISHERS with compressed or liquefied gas (carbon dioxide)

UN proper shipping name (RID) : FIRE EXTINGUISHERS with compressed or liquefied gas (carbon dioxide)

UN proper shipping name (ADN) : FIRE EXTINGUISHERS with compressed or liquefied gas (carbon dioxide)

UN proper shipping name (IMDG) : FIRE EXTINGUISHERS with compressed or liquefied gas (carbon dioxide)

UN proper shipping name (IATA) : FIRE EXTINGUISHERS with compressed or liquefied gas (carbon dioxide)

14.3 - Transport hazard class(es)

Carbon dioxide extinguisher

ADR Transport hazard class(es) : 2

ADR Classification code: : 6A

Pictograms



Transport hazard class(es) (RID) : 2

Pictograms



Transport hazard class(es) (ADN) : 2

Pictograms



Transport hazard class(es) (IMDG) : 2

Pictograms



Transport hazard class(es) (IATA) : 2

Pictograms



14.4 - Packing group

Packing group :

Packing group (RID) :

Packing group (ADN) :

Packing group (IMDG) :

Packing group (IATA) :

14.5 - Environmental hazards

Environmental hazards : No

Marine pollutant : No

14.6 - Special precautions for user

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ADR

<u>ADR Classification code:</u>	:	6A
<u>ADR Special provisions</u>	:	225+594
<u>ADR Limited quantity (LQ)</u>	:	120 ml
<u>ADR Excepted quantities</u>	:	E0
<u>ADR Packing instructions</u>	:	P003
<u>ADR Special packing provisions</u>	:	PP91
<u>ADR Mixed packing provisions</u>	:	MP9
<u>Instructions for portable tanks and bulk containers</u>	:	
<u>Special provisions for portable tanks and bulk containers</u>	:	
<u>ADR tank code</u>	:	
<u>ADR tanks special provisions</u> : <u>Vehicle for tank carriage</u>	:	
<u>ADR Transport category</u>	:	3
<u>ADR Tunnel restriction code</u>	:	E
<u>ADR Special provisions loading, unloading and handling</u>	:	CV9
<u>Special provisions - Packages</u>	:	
<u>Special provisions - Bulk</u>	:	
<u>Special provisions - Operation</u>	:	
<u>ADR Hazard identification number (Kemler No.)</u>	:	

RID

<u>Special provisions</u>	:	225, 594
<u>Limited quantity (LQ)</u>	:	120 ml
<u>Excepted quantities</u>	:	E0

ADN

<u>Special provisions</u>	:	225, 594
<u>Limited quantity (LQ)</u>	:	120 ml
<u>Excepted quantities</u>	:	E0

IMDG

<u>Special provisions</u>	:	225
<u>Limited quantity (LQ)</u>	:	120 ml
<u>Excepted quantities</u>	:	E0
<u>Packing instructions</u>	:	P003
<u>Special packing provisions</u>	:	PP91
<u>IBC instruction(s)</u>	:	
<u>IBC provisions</u>	:	
<u>Instructions for portable tanks and bulk containers</u>	:	
<u>Special provisions for portable tanks and bulk containers</u>	:	
<u>EmS codes</u>	:	F-C,S-V

Carbon dioxide extinguisher

<u>Stowage and handling</u>	:	Category A
<u>Segregation</u>	:	
<u>Properties and observations</u>	:	Fire extinguishers, containing compressed or liquefied gases under pressure above 175 kPa for expelling fire-extinguishing contents.
IATA		
<u>PCA - Excepted quantities</u>	:	E0
<u>PCA - Limited Quantity - Packing Instructions</u>	:	Interdit
<u>PCA - Limited Quantity - Maximum Net Quantity per Package</u>	:	Interdit
<u>PCA - Packing Instructions</u>	:	213
<u>PCA - Maximum Net Quantity per Package</u>	:	75 kg
<u>CAO - Packing Instructions</u>	:	213
<u>CAO - Maximum Net Quantity per Package</u>	:	150 kg
<u>Special Provisions</u>	:	A19
<u>ERG Code</u>	:	2L

14.7 - Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

- Not applicable

SECTION 15: Regulatory information

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

Substances REACH candidates None

Substances Annex XIV None Substances Annex XVII None

VOC content No data available

15.2 - Chemical Safety Assessment

Chemical safety assessment carried out for the product - No information available.

SECTION 16: Other information

SDS versions

Version	Issue date	Description of the amendments
2	23/05/2023	

Carbon dioxide extinguisher

Abbreviations and acronyms

- Aquatic Chronic 3: Dangers pour le milieu aquatique- toxicité à long terme pour le milieu aquatique – Catégorie 3
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
- EINECS: European Inventory of Existing Commercial Chemical Substances
- Eye Irrit. 2: Lésions oculaires graves/irritation oculaire – Catégorie 2
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- IATA: International Air Transport Association
- IMDG: International Maritime Code for Dangerous Goods- Skin Irrit. 2: Corrosion cutanée/irritation cutanée – Catégorie 2 - SVHC substance.
- Land transport (ADR/RID)

Data sources:

Supplier

[Http://echa.europa.eu/](http://echa.europa.eu/)

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

Texts of the regulatory sentences

Gaz liquéfié	Liquefied gas
H280	Contains gas under pressure; may explode if heated

Training advice

- Observe technical data sheet.

In conformity with Regulation (EC) No 2020/878

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

Observe technical data sheet.

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