

SAFETY DATA SHEET

According to Regulation (EC) No. 453/2010

CARBON DIOXIDE

Date of issue: 01/04/2015

Substance being used in cartridges- and / of extinguishers



WARNING



LABEL 2.2 -> Non flammable, Non toxic gas

1 IDENTIFICATION OF THE SUBSTANCE / mixture and of the company/undertaking

| | |
|-------------------------|--|
| Trade name | Carbon dioxide |
| SDS no | EIGA18A |
| Chemical description | Carbon dioxide CAS No : 124-38-9 EC no : 204-696-9 EC index no :--- |
| Registration-No. | listed in Annex IV / V REACH, exempted from Registration. |
| Chemical formula | CO ₂ |
| Supplier of the product | IJSFABRIEK STROMBEEK N.V. Broekstraat, 70 B- 1860 MEISE BELGIUM info@ysfab.be |
| Informing / Emergency | Phone + 32 2 272 41 34 |

Supplier of the extinguishers SICLI / LEYCO FIRE PROTECTION BELGIUM
Rue du Merlo 1
B-1180 BRUXELLES
BELGIUM
info@sicli.be

2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 {CLP}

Physical hazards gases under pressure : liquefied gas

Classification according to Directive 67/548/EEC {DSD} or 1999/45/EC {DPD}

Not classified as dangerous substance / mixture

Label elements

Labelling according to regulation (EC) No 1272/2008 {CLP}

Hazard pictograms (CLP)



Signal word (CLP) WARNING

Hazard statements (CLP) H208 - contains gas under pressure; may explode if heated.

Precautionary statements (CLP)

- storage P403 - store in a well-ventilated place

Other hazards

Asphyxiant in high concentrations
Contact with liquid cause cold burns/frostbite.

3 COMPOSITION / INFORMATION ON INGREDIENTS

Substance

| Name | Product identifier | % | Classification According to Directive 67/548/EEC | Classification According to Regulation (EC) No. 1272/2008 {CLP} |
|----------------|---|------|--|---|
| Carbon dioxide | (CAS N°) 124-38-9 (EC N°) 204-696-9 (EC index n°) --- (Registration-N°) *1 | 100% | Not classified | Press.Gas (Liq.) H280 |

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

** 1 listed in Annex IV / V REACH, exempted from registration*

** 2 registration deadline not expired*

** 3 registration not required: substance manufactured or imported <1t/y*

Full text or R-phrases see section 16. Full text of H-statements see section 16.

Mixture

Not applicable

4 FIRST AID MEASURES

First aid measures

- Inhalation

in high concentrations may cause asphyxiation. Symptoms may include loss of mobility consciousness. Victim may not be aware of asphyxiation.

Low concentrations of CO₂ cause increased respiration and headache.

Remove victim to uncontaminated area wearing self-contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.

- | | |
|--------------------|---|
| - Skin/eye contact | immediately flush eyes thoroughly with water for at least 15 minutes. Apply a sterile dressing. Obtain medical assistance. |
| - Ingestion | Ingestion is not considered a potential route of exposure. |

| |
|---------------------------------|
| 5 FIRE-FIGHTING MEASURES |
|---------------------------------|

Extinguishing media

Suitable extinguishing media Water spray or fog

Unsuitable extinguishing media Do not use water jet to extinguish.

Special hazards arising from the substance or mixture

Specific hazards Prolonged exposure to fire may cause containers to rupture/explode

Hazardous combustion products None

Advice for the fire-fighters

Specific methods Use fire control measures appropriate for the Surrounding fire. Exposure to fire and heat radiation may cause gas receptacles to rupture. Cool endangered receptacles with water spray jet from a protected position. Prevent water used in emergency cases from entering sewers and drainage systems.
If possible, stop flow of product.
Use water spray or fog to knock down fire fumes if possible.
Move containers away from the fire area if this can be done without risk.

Special protective equipment for fire fighters

use self-contained breathing apparatus
standard protective clothing and equipment for fire fighters

Move away from the container and cool with water from a protected position

Special protective equipment for fire fighters

in confined space use self-contained breathing apparatus.

6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Try to stop release
evacuate area

Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.

Ensure adequate air ventilation.

Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.

Act in accordance with local emergency plan.

Stay upwind.

Environmental precautions

try to stop release

Methods and material for containment and cleaning up

ventilate area

Reference to other sections

See also sections 8 and 13

7 HANDLING AND STORAGE OF THE PRODUCT IT SELF

Precautions for safe handling

Storage

keep container below 50° C in a well ventilated place

Handling

Suck back of water into the container must be prevented.

Do not allow back feed into the container.

Use only properly specified equipment, which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt.

Refer to supplier's container handling instructions.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

| | |
|---------------------------------|---|
| Personal protection | ensure adequate ventilation |
| Occupational exposure Limits | Carbon dioxide: TLV-TWA (ppm): 5000 Carbon dioxide: TLV-STEEL (ppm): 30000 Carbon dioxide: OEL (UK)-LTEL (ppm): 5000 Carbon dioxide: OEL (UK)-STEEL (ppm): 15000 Carbon dioxide: MAK- Germany (ppm): 5000 Carbon dioxide: ILV (EU) - 8 H - (mg/m ³): 9000 Carbon dioxide: ILV (EU) - 8 H - (ppm) : 5000 Carbon dioxide: HTP-värden - 8 H - (ppm): 5000 Carbon dioxide: HTP-värden - 8 H - (mg/m ³): 9100 Carbon dioxide: NGV- (ppm): 5000 Carbon dioxide: NGV- (mg/m ³): 9000 Carbon dioxide: KTV- (ppm): 10 Carbon dioxide: KTV- (mg/m ³): |
| Thermal hazards | none necessary |
| Environnement exposure controls | None necessary |

9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance

- Physical state at 20°C/101.3kPa liquefied gas

- Color colorless

Odor no odor warning properties

Molecular weight 44 g/mol

| | |
|---------------------------------------|--|
| Melting point (°C) | -78,5 °C |
| Boiling point (°C) | -56.6 °C (s) |
| Flash point | not applicable for gases and gas mixtures |
| Critical temperature (°C) | 30 °C |
| Evaporation | not applicable for gases and gas mixtures |
| Vapour pressure, 20°C | 57.3 bar (a) |
| Vapour pressure, 50°C | not applicable |
| Relative density, gas (air=1) | 1.52 |
| Relative density, liquid (water=1) | 0.82 |
| Solubility in water (mg/l) | 2000 mg/l completely soluble |
| Flammability range (vol% in air) | non flammable |
| Other data | gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level |

10 STABILITY AND REACTIVITY

| | |
|--------------------------|--------------------------------|
| Stability and reactivity | stable under normal conditions |
|--------------------------|--------------------------------|

11 TOXICOLOGICAL INFORMATION

| | |
|----------------------|--|
| Toxicity information | in high concentrations cause rapid circulatory insufficiency. Symptoms are headache, nausea and vomiting, which may lead to unconsciousness. |
|----------------------|--|

12 ECOLOGICAL INFORMATION

Ecological effects information no ecological damage caused
By this product

Global warming factor (CO₂=1) 1

when discharged in large quantities may contribute to the greenhouse effect
contains greenhouse gas(es) not covered by Regulation (EC) 842/2006

13 DISPOSAL CONSIDERATIONS

General do not discharge into any place where its accumulation could be dangerous.
To atmosphere in a well ventilated place.
Discharge to atmosphere in large quantities should be avoided.
Contact supplier if guidance is required.

List of hazardous waste codes
(from Commission Decision
2001/118/EC) 16 05 05 : gases in pressure containers other than those mentioned in 16 05 04.

14 TRANSPORT INFORMATION

UN No. 1013

H.I. nr 20

Transport by road/rail

ADR/RID

- Proper shipping name CARBON DIOXIDE

Transport by air

ICAO-TI / IATA-DGR

- Proper shipping name

CARBON DIOXIDE

Transport by sea

IMDG

- proper shipping name

CARBONE DIOXIDE

labelling



2.2 : Non-flammable, non-toxic gas

Transport by road / rail

ADR / RID

Class

2

Classification code

2 A

Hazard identification number

20

Tunnel restriction

C/E - tank carriage : Passage forbidden through
Tunnels of category C, D and E.

Other carriage : passage forbidden through
Tunnels of category E

Transport by air

ICIA-TI / IATA-DGR

Class / div. (sub.risk(s))

2.2

Transport by sea

IMDG

Class / div. (Sub.risk(s))

2.2

Emergency schedule

(EmS) - fire

F-C

Emergency schedule

(EmS) - spillage

S-V

Packing group not applicable

Environmental hazards none

Packing instruction(s)

Transport by road/rail
ADR / RID P200

Transport by air
ICAO-TI / IATA-DGR
Passenger and cargo aircraft 200
Cargo aircraft only 200

Transport by sea
IMDG P200

other transport information

Avoid transport on vehicles where the load is not separated from the driver's compartment.
Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency.
Before transporting product containers:

- Ensure that containers are firmly secured.
- Ensure cylinder valve is closed and not leaking.
- Ensure valve outlet cap nut or plug (where provided) is correctly fitted.
- Ensure valve protection device (where provided) is correctly fitted.
- Ensure there is adequate ventilation.
- Compliance with applicable regulations.

| |
|----------------------------------|
| 15 REGULATORY INFORMATION |
|----------------------------------|

EU-Regulations

| | |
|---------------------------|-------------|
| Restrictions on use | None |
| Seveso directive 96/82/EC | Not covered |

National regulations

| | |
|------------------------|--|
| National legislation | ensure all national/local regulations are observed |
| Water hazard class WGK | --- |
| Kenn-Nr. | 256 |

Chemical safety assessment a CSA does not need to be carried out
For this product

16 OTHER INFORMATION

| | |
|-----------------------|---|
| Indication of changes | revised safety data sheet in accordance with Commission regulation (EU) No 453/2010 |
| Training advice | the hazard of asphyxiation is often overlooked and must be stressed during operator training. |
| Further information | this Safety Data Sheet has been established in accordance with the applicable European Union legislation. |

Full text of R-, H- and EUH-phrases

| | |
|-------------------|--|
| Press. Gas (Liq.) | Gases under pressure : Liquefied gas |
| H280 | Contains gas under pressure; may explode if heated |

DISCLAIMER OF LIABILITY

Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out.

Details given in this document are believed to be correct at the time of going to press. Whilst proper care has been taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted.

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