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	CO2
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 nock 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 materiel 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-STEL (ppm): 30000 Carbon dioxide: OEL (UK)-LTEL (ppm): 5000 Carbon dioxide: OEL (UK)-STEL (ppm): 15000 Carbon dioxide: MAK– Germany (ppm): 5000 Carbon dioxide: ILV (EU) – 8 H – (mg/m³): 9000 Carbon dioxide: ILV (EU) – 8 H – (ppm) : 5000 Carbon dioxide: HTP-värden – 8 H – (ppm): 5000 Carbon dioxide: HTP-värden – 8 H – (mg/m³): 9100 Carbon dioxide: NGV– (ppm): 5000 Carbon dioxide: NGV– (mg/m³): 9000 Carbon dioxide: KTV– (ppm): 10 Carbon dioxide: KTV– (mg/m³):
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/1 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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