SAFETY DATA SHEET

According to the REACH Regulations (EC) 1907/2006 amended by Regulation (EU) 2020/878

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SECTION 1: IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 PRODUCT IDENTIFIER

Product name: *Carbon Dioxide Fire Extinguishers and Gas Cartridges*

Product codes: *CO2C, CO5C, CO2A, CO5A and other models containing carbon dioxide. Fire extinguisher gas cartridges containing carbon dioxide.*

1.2 RELEVANT IDENTIFIED USES OF SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

1.2.1 Relevant identified uses

Use of substance / mixture: *Fire extinguishing agent in a container filled and pressurised with carbon dioxide for use as a fire extinguisher or propellant for fire extinguisher.*

Function or use category: *Suitable for Class B fires and fires involving electrical risk.*

1.2.2 Uses advised against

Not for human or animal ingestion or drug use.
Do not use for Class A, Class C, class D or class F fires.
Do not use on Lithium-Ion battery fires.

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Supplier: *VICTORY ZX GMBH*
Street: *Lerchenfeldstr. 72,*
Postal City/Postal Code/Country: *47877 Willich-Anrath*
Company telephone: *+49 (0) 2156 91499 77 (08.30-17.00 Monday- Friday)*
Website / Email: *www.victoryzx.de*
National Contact: *sales@victoryzx.de*

1.4 EMERGENCY TELEPHONE NUMBER

Emergency telephone number: *VICTORY ZX GMBH (08.30-17.00 Monday- Friday)*
Tell+49 (0) 2156 91499 77

Medical emergency: *In a medical emergency, immediately call the emergency number 112 and contact the responsible regional poison control centre.*

SECTION 2: HAZARDS IDENTIFICATION

2.1 CLASSIFICATION OF SUBSTANCE OR MIXTURE:

EU Regulation (EC) No. 1272/2008 (CLP):

Gases under Pressure: Liquefied Gas: H280: Contains gas under pressure; may explode if heated.

Adverse physicochemical, human health and environmental effects:

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practices.

2.2 LABEL ELEMENTS

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

The table below shows the labelling elements associated with classification in accordance with CLP but not required on extinguisher labelling. See Eurofeu.org Position Paper (Sept 2015) concerning non-CLP labelling of Fire Extinguishers.

Hazard Pictograms	
Pictogram Code	*GHS04 Gases Under Pressure (*)*
Signal Word	*WARNING*
Hazard Statements	
Physical Hazards	*H280: Contains gas under pressure; may explode if heated. (*)*
Health Hazards	
Environmental Hazards	
Combinations	
Precautionary Statements	
General	
Prevention	
Response	
Storage	*P410 + P403 Protect from sunlight. Store in well-ventilated place (*)*
Disposal	

Note: (*) only applies when extinguisher is pressurised

2.3 OTHER HAZARD

This product does not contain any substances ⩾0.1% that have been assessed as PBT and/or vPvB in accordance with REACh Annex XIII regulations.

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0.1 %.

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Other hazards – Carbon Dioxide

Contact with Carbon Dioxide may cause cold burns or frost bite. In high concentrations CO2 causes rapid circulatory insufficiency even at normal levels of oxygen concentration. Symptoms are headache, nausea, and vomiting, which may lead to unconsciousness and death.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 SUBSTANCES

Content classified as a substance.
Full text of H-Statements: See sections 2 and 16.

Chemical Name	Registration No.	Index No.	CAS No.	EC No.	Content (% wt.)	Classification
Carbon Dioxide (#)	*Listed in Annex IV/V of Regulation (EC) No 1907/2006 (REACH), exempted from registration.*	*N/A*	*124-38-9*	*204-696-9*	*100 (*)*	*Not classified*

(*) The purity of the substance in this section is used for classification only and does not represent the actual purity of the substance as supplied in articles listed in section 1, for which other documentation should be consulted. Contains no other components or impurities which will influence the classification of the product.
(#) This substance has workplace exposure limit(s).

3.2 MIXTURES

Not applicable

SECTION 4: FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

General Information: *In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. Remove victim to uncontaminated area wearing self-contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.*

First aid measures after inhalation: *In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. Remove victim to uncontaminated area wearing self-contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped. Low concentrations of CO_2 cause increased respiration and headache.*

First aid measures after skin contact: *Contact with evaporating liquid may cause frostbite or freezing of skin. Remove contaminated clothing and flush affected areas with lukewarm (NOT HOT) water. Seek medical attention immediately if blistering of the dermal surface or if deep tissue freezing occurs*

First aid measures after eye contact: *Rinse the eye with water immediately. Remove contact lenses, if present and easy to do. Continue rinsing. Flush thoroughly with water for at least 15 minutes. Get immediate medical assistance. If medical assistance is not immediately available, flush an additional 15 minutes.*

First aid measures after Ingestion: *Ingestion is not considered a potential route of exposure.*

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Symptoms and effects: *Respiratory arrest.*
Contact with liquefied gas can cause damage (frostbite) due to rapid evaporative cooling.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Hazards: *Respiratory arrest.*
Contact with liquefied gas can cause damage (frostbite) due to rapid evaporative cooling.

Treatment: *Thaw frosted parts with lukewarm water. Do not rub affected area. Get immediate medical advice/attention*

SECTION 5: FIRE FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA

General information: *Contains liquefied gas under pressure. In a fire or if heated, a pressure increase will occur, and the container may burst or explode.*

Suitable extinguishing media: *Substance is an extinguishing media and therefore non-flammable / non-combustible. Use extinguishing media appropriate for surrounding fire and materials involved. Damaged cylinders should be handled only by specialists.*

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Formation of toxic gases is possible during heating or in *Pressurized container may explode when exposed to heat or flame.*

Case of fire the following compounds can be released: *Decomposition products in a fire may include the following materials: carbon dioxide, carbon monoxide.*

5.3 ADVICE FOR FIRE FIGHTERS

Firefighting instructions: *Promptly isolate the scene by removing all persons from the vicinity of the*

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incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
Rescuers should not enter oxygen depleted room without the use of self-contained full face breathing equipment. Standard protective clothing and equipment (Self Contained Breathing Apparatus) for fire fighters.

Specific Hazards: *Pressurized containers may rupture or burst when exposed to heat of a fire. If fire extinguisher exposed to fire cool with water from a safe distance. 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.*

SECTION 6: ACCIDENTIAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY PROCEDURES

6.1.1 General measures: *Do not handle until all safety precautions have been read and understood. Ensure adequate ventilation.*

6.1.2 For non-emergency personnel *No action shall be taken involving any personal risk or without suitable training. Try to stop release and evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not enter area where high concentrations may exist without appropriate protective equipment. Prevent from entering sewers, basements and work pits, or any place where its accumulation can be dangerous.*

6.1.3 For emergency responders *If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". Environmental precautions: Ensure emergency procedures to deal with accidental gas releases are in place to avoid contamination of the environment. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).*

6.2 ENVIRONMENTAL PRECAUTIONS

Contents not regarded as dangerous for the environment.

Prevent further leakage or spillage if safe to do so.

6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

Method for cleaning up: *Provide adequate ventilation. Keep area evacuated and free from ignition sources until any spilled liquid has evaporated (ground free from frost).*

6.4 REFERENCE TO OTHER SECTIONS

See Section 8 (PPE) for information on personal protection equipment.

See Section 13 (Disposal) for disposal information (Disposal).

SECTION 7: HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

Precautions for safe handling: *The product should be handled following good safety practices.*

The product should be installed and maintained in accordance with applicable standards and manufacturer's instructions.

Do not block access to fire equipment or fire points.

Protect cylinders from physical damage; do not drag, roll, slide or drop. The maintenance and repair of the fire extinguisher / gas cartridges must be carried out by qualified competent personnel in accordance with relevant regulations. Do not remove labels or deface instructions shown on the product. Inspect regularly.

Handling and operation: **Operation**: *Follow extinguisher operational instructions on label.*
For use only on class B fires and fires involving electrical risks.
Do not hold horn during discharge to avoid risk of frost bite.
Handling: *Store in cool, dry, well-ventilated areas out of direct sunlight and away from heat and ignition sources.*

Keep away from combustible materials.

Do not expose cylinders or gas cartridges to temperatures above +55°C.

Full cylinders or gas cartridges should be stored separately from empties.

Extinguishers should be stored in the vertical position and properly secured to prevent them from falling over.

Observe all regulations and local requirements regarding storage of containers.

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7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Technical measures: *Comply with applicable local or national regulations.*

Storage conditions: *Store only in original packaging until commissioned and installed as fire Extinguisher or gas cartridge as part of fire extinguisher.*

Incompatible products: *Certain reactive metals, hydrides, moist caesium monoxide, or lithium acetylene carbide diamino may ignite. Passing carbon dioxide over a mixture of sodium peroxide and aluminium or magnesium may explode. Cylinders should be internally dry when refilling.*

Storage temperature: *-30°C to + 55°C*

Heat and ignition sources: *Avoid high temperatures.*

Storage area: *Contents under pressure – inspect periodically for extinguisher signs of corrosion or damage to ensure container integrity. Observe all regulations and local requirements regarding storage of containers. Containers should not be stored in conditions likely to encourage corrosion.*
Pressurized extinguishers should be properly stored and secured to prevent falling or being knocked over.
Store containers in location free from fire risk and away from sources of heat and ignition.
Keep away from combustible materials

7.3 SPECIFIC END USES (S)

Only to be used as a fire extinguisher or gas cartridge within or connected to a fire extinguisher.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

8.1.1 Ingredients with limit values that require monitoring at the workplace:

Chemical name	Type	Exposure Limit Values	Source
Carbon Dioxide	MAK	5.000 ppm /9.000 mg/m³	Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001, as amended (04 2021)
	MAK CEIL	10.000 ppm /18.000 mg/m³	Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001, as amended (04 2021)
	TWA	5.000 ppm /9.000 mg/m³	EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU, as amended (12 2009)
	TWA	5.000 ppm / 9.000 mg/m³	EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU, as amended (12 2009)
	WEL -LTEL	5.000 ppm / 9.150 mg/m³	United Kingdom
	WEL -STEL	15.000 ppm /27,400 mg/m³	United Kingdom
	OEL (IE)	5.000 ppm / 9.000 mg/m³	Ireland OEL (IE) 8-hour reference period (ppm and mg/m³)
	OEL (IE)	15.000 ppm /27,400 mg/m³	I Ireland OEL (IE) 15 min reference period (ppm and mg/m³)

8.1.2 Recommended monitoring procedures *No additional information available.*

8.1.3 Air contaminants formed *No additional information available.*

8.1.4 DNEL and PNEC *No additional information available.*

8.1.5 Control banding *No additional information available.*

8.2 EXPOSURE CONTROLS

8.2.1 Appropriate engineering controls

Appropriate engineering controls: *Ensure adequate air ventilation. Oxygen detectors should be used when asphyxiating gases may be released. Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded. Systems under pressure should be regularly checked for leakages. Preferably use permanent leak tight connections (e.g. welded pipes). Do not eat, drink or smoke when using the product. CO_2 detectors should be used when CO_2 may be released. A risk assessment for the work locations should be conducted to determine the appropriate PPE.*

Fire Fighting Equipment: *Periodically check that the fire extinguisher or gas cartridge or auxiliary charge is within allowable tolerances. Extinguisher maintenance and testing must be performed by qualified competent personnel in accordance with local regulations*

8.2.2 Personal protective equipment

Personal protective equipment: **Using Fire Equipment for Fire Fighting** - *Individual protection measures, e.g. personal protective equipment: As the fire extinguisher an emergency device, there are no individual protection to be worn. If possible, prior to use, wear protective gloves, goggles with side protection and a dust mask.*

Personal protective equipment symbol(s).

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For Fire extinguishers refilling or handling the CO_2 extinguishers, CO_2 gas cartridges and auxiliary CO_2 charges the following Guidelines apply:

8.2.2.1 Eye and face protection

Eye protection: — *Goggles or face-shield to EN166 should be used to avoid exposure to liquid splashes. Wear eye protection to EN 166 when using gases. Guideline: EN 166 Personal Eye Protection.*

8.2.2.2 Skin protection

Hand Protection: — *Guideline: EN 388 Protective gloves against mechanical risks. Additional Information: Wear working gloves while handling containers.*

Body protection: — *No special precautions.*

Other: — *Wear safety shoes while handling containers. Guideline: ISO 20345 Personal protective equipment - Safety footwear.*

8.2.2.3 Respiratory protection — *When allowed by a risk assessment Respiratory Protective Equipment (RPE) may be used. The selection of the Respiratory Protective Device (RPD) must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected RPD. Self-contained breathing apparatus (SCBA) or positive pressure airline with mask are to be used in oxygen-deficient atmospheres Guideline : EN 137 Respiratory protective devices - Self-contained open-circuit compressed air breathing apparatus with full face mask - Requirements, testing, marking.*

8.2.2.4 Thermal hazards: — *No precautionary measures are necessary.*

8.2.2.5 Hygiene measures: — *Specific risk management measures are not required beyond good industrial hygiene and safety procedures. Do not eat, drink or smoke when using the product.*

8.2.3 Environmental exposure controls

Environmental Exposure Controls: — *For waste disposal, see section 13 of the SDS.*

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Extinguishing agent – Propellant and Fire Fighting Agent	
Physical state / form	*Compressed Liquified gas*
Colour	*Colourless*
Odour	*Odour threshold is subjective and is inadequate to warn of over exposure*
pH	*Not applicable*
Melting point °C	*-56.6*
Boiling Point °C (at 5.2 bar)	*-57*
Sublimation point °C	*-78.5*
Critical Temperature °C	*31*
Flash Point	*Not applicable to gases and gas mixtures. Product does not sustain combustion*
Evaporation Rate	*Not applicable to gases and gas mixtures.*
Flammability (solid, gas)	*This product is not flammable.*
Flammability Limit - Upper (%)	*Not applicable.*
Flammability Limit - Lower (%)	*Not applicable.*
Vapor pressure: bar (10 °C)	*45.1*
Vapor density (air=1) (at 21 °C)	*1.522*
Relative density	*No data available.*
Solubility in Water: mg/l (at 25 °C)	*2,900*
Partition coefficient (n-octanol/water)	*0.83*
Autoignition Temperature	*Not applicable.*
Decomposition Temperature	*Not known.*
Kinematic viscosity	*No data available.*
Dynamic viscosity: mPa.s (at 20 °C)	*0.07*
Explosive properties	*Not applicable.*
Oxidizing properties	*Not applicable.*

9.2 OTHER INFORMATION

9.2.1 Other safety characteristics

Molecular weight: — *44,01 g/mol (CO_2) .*

Carbon Dioxide — *Gas/Vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level.*

SECTION 10: STABILITY AND REACTIVITY

10.1 REACTIVITY — *The product is non-reactive under normal conditions of use, storage, and transport.*

10.2 CHEMICAL STABILITY — *Stable at normal conditions when used as recommended.*

10.3 POSSIBILITY OF HAZARDOUS REACTIONS — *No dangerous reactions known to occur under normal conditions of use.*

10.4 CONDITIONS TO AVOID — *None under recommended storage and handling conditions.*

10.5 INCOMPATIBLE MATERIALS — *Certain reactive metals, hydrides, moist caesium monoxide, or lithium*

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acetylene carbide diamino may ignite. Passing carbon dioxide over a mixture of sodium peroxide and aluminium or magnesium may explode. No reaction with any common materials in dry or wet conditions. Cylinders should be internally dry when refilling. Due to the presence of carbon dioxide, carbonic acid is formed in the presence of moisture.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS — *Under normal conditions of storage and use, hazardous decomposition products should not be produced*

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

Acute toxicity	*Based on available data, the classification criteria are not met.*
Primary irritant effect:	
Skin corrosion/irritation	*Based on available data, the classification criteria are not met.*
Serious eye damage/irritation	*Causes serious eye damage.*
Respiratory or skin sensitisation	*Based on available data, the classification criteria are not met.*
Additional toxicological information: CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)	
Germ cell mutagenicity	*Based on available data, the classification criteria are not met.*
Carcinogenicity	*Based on available data, the classification criteria are not met.*
Reproductive toxicity	*Based on available data, the classification criteria are not met.*
STOT-single exposure	*Based on available data, the classification criteria are not met.*
STOT-repeated exposure	*Based on available data, the classification criteria are not met.*
Aspiration hazard	*Based on available data, the classification criteria are not met.*

11.2 INFORMATION ON OTHER HAZARDS

Acute toxicology: *Carbon dioxide (CO_2)*	*Can cause death even when normal oxygen levels (20- 21%) are maintained. 5% CO_2 has been found to act synergistically to increase the toxicity of certain other gases (CO, NO_2). CO_2 has been shown to enhance the production of carboxy- or met-haemoglobin by these gases possibly due to carbon dioxide's stimulatory effects on the respiratory and circulatory systems*
Eye Contact:	*The liquid form of this material can produce chilling sensations and discomfort and frostbite.*
Skin Contact:	*Evaporation of liquid from skin can produce chilling sensations. Frostbite can occur. Avoid carbon dioxide snow*
Inhalation:	*Carbon dioxide is an asphyxiate. Effects of oxygen deficiency (below 6%) are as follows: convulsive movements, possible respiratory collapse and death.*
Ingestion:	*Not a likely route of entry.*
Acute Overexposure:	*Contact can produce chilling sensations, light headedness, giddiness, shortness of breath, muscular tremors and weakness, and acrocyanosis. Also, unconsciousness or even death*
Chronic Overexposure:	*Prolonged exposure to an oxygen deficient atmosphere (below 18 % oxygen) may affect the heart and nervous system.*

SECTION 12: ECOLOGICAL INFORMATION

12.1 TOXICITY	*No known ecological damage caused by this product*
12.2 PERSISTENCE AND DEGRADABILITY	*Not applicable to gases and gas mixtures.*
12.3 BIOACCUMULATIVE POTENTIAL	*The subject product is expected to biodegrade and is not expected to persist for long periods in an aquatic environment.*
12.4 MOBILITY IN SOIL	*Because of its high volatility, the product is unlikely to cause ground or water pollution.*
12.5 RESULTS OF PBT AND VPVB ASSESSMENT	*Not classified as PBT or vPvB.*
12.6 ENDOCRINE DISRUPTING PROPERTIES	*No additional information available.*
12.7 OTHER ADVERSE EFFECTS	*No ecological damage caused by this product.*

SECTION 13: DISPOSABLE INFORMATION

13.1 WATER TREATMENT METHODS

13.1.1 General information — *Do not discharge into any place where its accumulation could be dangerous. Vent to atmosphere in a well-ventilated place. Dispose of in compliance with local authority regulations. It can be discharged to atmosphere in a well-ventilated place; this should be avoided in large quantities. The gas cylinders are refillable. If the cylinder should be placed out of service, ask the manufacturer / supplier about recovery / recycling information.*

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13.1.2 Disposal methods

Refer to the EIGA code of practice (Doc.30 "Disposal of Gases", downloadable at http://www.eiga.org) for more guidance on suitable disposal methods. Empty containers may retain some product residues. This material and its container must be disposed of in a safe manner. Discharge, treatment, or disposal may be subject to national, state, or local laws.
Special Precautions for Landfill or Incineration: Do not incinerate.

13.1.3 European Waste Codes Container:

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

SECTION 14: TRANSPORT INFORMATION

In accordance with ADR / IMDG / IATA / ADN / RID. Always check stated transport regulations as subject to change.
When extinguisher transported / or gas cartridge connected to extinguisher use UN1044. See (A) below
When CO_2 gas cartridges are shipped separately from extinguishers use UN1013 - see (B) below.

	(a) Fire Extinguisher	(b) CO_2 Gas Cartridge
14.1 UN NUMBER OR ID NUMBER (*)		
UN-No. (ADR):	*UN1044.*	*UN1013.*
UN-No. (IMDG):	*UN1044.*	*UN1013.*
UN-No. (IATA):	*UN1044.*	*UN1013.*
UN-No. (ADN):	*UN1044.*	*UN1013.*
UN-No. (RID):	*UN1044.*	*UN1013.*
14.2 UN PROPER SHIPPING NAMES (*)		
Proper shipping names. (ADR):	*Fire Extinguishers.*	*Carbon Dioxide*
Proper shipping names. (IMDG):	*Fire Extinguishers.*	*Carbon Dioxide*
Proper shipping names. (IATA):	*Fire Extinguishers.*	*Carbon Dioxide*
Proper shipping names. (ADN):	*Fire Extinguishers.*	*Carbon Dioxide*
Proper shipping names. (RID):	*Fire Extinguishers.*	*Carbon Dioxide*
14.3 TRANSPORT HAZARD CLASS(ES) (*)		
ADR – Transport hazard class(es):	*2.2.*	*2.2.*
IMDG – Transport hazard class(es):	*2.2.*	*2.2.*
IATA – Transport hazard class(es):	*2.2.*	*2.2.*
ADN – Transport hazard class(es):	*2.2.*	*2.2.*
RID – Transport hazard class(es):	*2.2.*	*2.2.*
14.4 PACKING GROUP (*)		
Packing group ADR:	*Not applicable.*	*Not applicable.*
Packing group IMDG:	*Not applicable.*	*Not applicable*
Packing group IATA:	*Not applicable.*	*Not applicable*
Packing group ADN:	*Not applicable.*	*Not applicable*
Packing group RID:	*Not applicable.*	*Not applicable*

14.5 ENVIRONMENTAL HAZARDS

Dangerous for the environment:	*No.*
Marine pollutant:	*No.*
Other information:	*No supplementary information available.*

14.6 SPECIAL PRECAUTIONS FOR USER

Overland transport:	*Consult current ADR Regulations prior to shipping by road.*
Transport by sea:	*Consult current IMDG Regulations prior to shipping by sea.*
Air transport:	*Consult current IATA Regulations prior to shipping by air.*
Inland waterway transport:	*Consult current ADN Regulations prior to shipping by inland waterway.*
Rail transport:	*Consult current ADR Regulations prior to shipping by rail.*

14.7 MARITIME TRANSPORT IN BULK CONTAINER TO IMO INSTRUMENTS

Consult current IMO Regulations prior to shipping by sea.

SECTION 15: REGULATORY INFORMATION

15.1 HEALTH, AND ENVIRONMENTAL REGULATIONS / LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

15.1.1 EU Regulations

REACH Annex XVII (Restrictions List):	*Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)*
REACH Annex XIV (Authorisations List):	*Contains no substance(s) listed on REACH Annex XIV (Authorisations List)*
REACH Candidate List (SVHC):	*Contains no substance(s) listed on REACH Candidate List.*
PIC Regulation List (Prior Informed Consent):	*Contains no substance(s) listed on PIC list (Regulation EU649/2012 concerning the export and import of hazardous chemicals).*
POC Regulation List (Persistent Organic Pollutants):	*Contains no substance(s) listed on POP list (Regulation EU2019/1021*

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	concerning persistent organic pollutants).
Ozone Regulation (2024/590):	*Contains no substance(s) listed on Ozone Depletion list (Regulation EU 2024/590) concerning substances that deplete the ozone layer).*
Explosives Precursors Regulation (2019/1148):	*Contains no substance(s) listed on Explosives Precursors list (EU Regulation 2019/1148 concerning marketing and use of explosive precursors).*
Drug Precursors Regulation (273/2004):	*Contains no substance(s) listed on Drug Precursors list (EU Regulation 273/2004 on the manufacture and the placing on the market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances).*
Seveso regulations 96/82/CE:	*Not included.*

15.2 CHEMICAL SAFETY ASSESSMENT *No chemical safety assessment has been carried out by the supplier.*

SECTION 16: OTHER INFORMATION

LEGEND / Abbreviations and acronyms.

ADN	*European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways*
ADR	*European Agreement Concerning the International Carriage of Dangerous Goods by Road*
ATE	*Acute Toxicity Estimate*
BCF	*Bioconcentration factor*
BLV	*Biological limit value*
BOD	*Biochemical oxygen demand (BOD)*
COD	*Chemical oxygen demand (COD)*
DMEL	*Derived Minimal Effect level*
DNEL	*Derived-No Effect Level*
EC No.	*European Community number*
EC50	*Median effective concentration*
EN	*European standard*
IARC	*International Agency for Research on Cancer*
IATA	*International Air Transport Association Dangerous Goods Regulations*
IMDG	*International Maritime Code for Dangerous Goods*
LC50	*Median lethal concentration*
LD50	*Median lethal dose*
LOAEL	*Lowest Observed Adverse Effect Level*
NOAEC	*No-Observed Adverse Effect Concentration*
NOAEL	*No-Observed Adverse Effect Level*
NOEC	*No-Observed Effect Concentration*
OECD	*Organisation for Economic Co-operation and Development*
OEL	*Occupational Exposure Limit*
PBT	*Persistent Bio Accumulative Toxic*
PNEC	*Predicted No-Effect Concentration*
RID	*Regulation Concerning the International Transport of Dangerous Goods by Rail*
SDS	*Safety Data Sheet*
STP	*Sewage treatment plant*
ThOD	*Theoretical oxygen demand*
TLM	*Median Tolerance Limit*
VOC	*Volatile Organic Compounds*
CAS No.	*Chemical Abstract Service number*
NOS	*Not Otherwise Specified*
vPvB	*Very Persistent and Very Bio Accumulative*
ED	*Endocrine disruptor*

KEY LITERATURE REFERENCES AND SOURCES FOR DATA

REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (REACH) AS AMENDED. REGULATION (EC) 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL AS AMENDED. DATA FROM MANUFACTURERS OF THE SUBSTANCE/MIXTURE, IF AVAILABLE FROM INGREDIENT SUPPLIERS AND REGISTRATION DOSSIERS.

OTHER INFORMATION:

The fire extinguisher is not classified as a substance or item in accordance with Regulation (EC) no. 1907/2006 EC. Therefore, they must be considered as articles, no substance is intended to be released during handling. Therefore, there is no obligation to provide a safety data sheet SDS as required by Article (EC) no. 1907/2006 EC, Article 31.

DISCLAIMER OF LIABILITY:

The information contained in the present sheet is based on our own knowledge and believed accurate and reliable. This information is based on current knowledge and is intended to describe the product for the purposes of health, safety, and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. Users must verify the suitability and thoroughness of provided information according to each specific use of the product. This information in this safety data sheet applies to the specific products (mentioned section 1) and not necessarily correct for use with other chemicals/products.

Full text of H- and EUH-statements	
H280	*Contains gas under pressure; may explode if heated.*

TRAINING INFORMATION: *Users of breathing apparatus must be trained. The hazard of asphyxiation is often overlooked and must be stressed during operator training. Ensure operators understand the hazards. After use indoors, ventilate thoroughly. Do not breathe the gas. Keep container in a well-ventilated place.*

END OF SDS