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: *ABC Dry Chemical Powder Fire Extinguishers (pressurised or unpressurised)*

Product code: *PD2A, PD6E-E, PD9E-E, PD12E-E, PD50E and GPD50 (models pressurised with nitrogen)*
GPD6, GPD6E-E, GPD9, GPD12E (models pressurised with carbon dioxide)
ABC Firefighting Powders: KB30/24, KB120/23 and KB121/23

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 pressurised with nitrogen or carbon dioxide for use as a fire extinguisher*

Function or use category: *Class ABC Firefighting*

1.2.2 Uses advised against

Not for human or animal ingestion or drug use.
Do not use for class D or F fires.
Not for use for fires involving Lithium-Ion batteries.

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):
H280 Contains gas under pressure; may explode if heated.
Note: Only when pressurised with Nitrogen or Carbon Dioxide depending on model.
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).
Note: 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	

(*) 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

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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 %.

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

Not applicable.

3.2 MIXTURES

Blend based on ammonium salts with mineral additives / rounded values.

Chemical Name	Registration No.	Index No.	CAS No.	EC No.	Content (% wt.)	Classification
Mono Ammonium Phosphate	01-2119488166-29-0038	N/A	7722-76-1	231-764-5	20-90	Not classified
Ammonium Sulphate	01-2119455044-46-0079	N/A	7783-20-2	231-984-1	5-70	Not classified
Mica substance	-	N/A	12001-26-2	-	< 5	Not classified
Silica White (amorphous silica)	-	N/A	7631-86-9	231-545-4	~3	Not classified
Methyl Hydrogen Polysiloxane	-	N/A	63148-57-2	-	< 1	Not classified
Nitrogen (*)	Listed in Annex IV/V of Regulation (EC) No 1907/2006 (REACH), exempted from registration.	N/A	7727-37-9	231-783-9	Propellant	Not classified
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	Propellant	Not classified

(*) Propellant for stored pressure portable models and mobile extinguishers with external N2 cylinder : - non-toxic, non-flammable compressed gas. (**) Propellant for CO_2 gas cartridges: - non-toxic, non-flammable liquefied gas in cylinder and compressed gas when released to extinguisher cylinder.
Carbon Dioxide has workplace exposure limit(s). PBT: persistent, bio accumulative and toxic substance. vPvB: very persistent and very bio accumulative substance.
Full text of H-Statements: See sections 2 and 16.

SECTION 4: FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

First aid measures general: *In case of allergic symptoms, especially in the breathing area, seek medical advice immediately. In case of doubt or persistent symptoms, always consult a physician.*

First aid measures after inhalation: *Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.*

First aid measures after skin contact: *Flush contaminated skin with plenty of mild soap and clean water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.*

First aid measures after eye contact: *Immediately flush eyes with plenty of clean water for 10-15 mins, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.*

First aid measures after Ingestion: *Rinse mouth immediately, remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give plenty of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.*

Medical conditions possibly aggravated by exposure: *Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema, or bronchitis. Skin contact may aggravate existing skin disease. Chronic overexposure may cause pneumoconiosis ("dusty lung" disease).*

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Symptoms/effects: *Irritation of the respiratory tract. Cause eye irritation.*

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Seek emergency medical attention. *Treat symptomatically*

SECTION 5: FIRE FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA

General information: *Mixture is an extinguishing agent and therefore non-flammable / non-combustible.*

Suitable extinguishing media: *Use extinguishing media appropriate for surrounding fire and materials involved.*

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Unsuitable extinguishing media: *Do not use a heavy water stream.*

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Formation of toxic gases is possible during heating or in case of fire the following compounds can be released: *Pressurized container may explode when exposed to heat or flame. Combustion products include carbon monoxide, carbon dioxide, other hydrocarbon fragments, sulphur oxides and phosphorus compounds.*

5.3 ADVICE FOR FIRE FIGHTERS

Precautionary measures fire: *Evacuate area. 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.*

Firefighting instructions: *Exercise caution when fighting any chemical fire.*

Protection during firefighting: *Do not enter fire area without proper protective equipment, including respiratory protection, especially in confined spaces. Use water spray or fog for cooling containers exposed to fire.*

SECTION 6: ACCIDENTIAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY PROCEDURES

General measures: *Do not handle until all safety precautions have been read and understood. Avoid contact with skin and eyes. Avoid dust formation.*

This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used. In case of dangerous gases, vapours or dusts self-contained breathing apparatus or suitable masks and filters need to be advised.

6.1.1 For non-emergency personnel

Protective equipment: *Wear recommended personal protective equipment.*

Measures in case of dust release: *Provide adequate ventilation to minimize dust concentrations.*

Emergency Procedures: *Ventilate spillage area*

6.1.2 For emergency responders

Protective equipment: *Do not attempt without suitable protective equipment. For further information refer to section 8. "Exposure controls/ personal protection"*

6.2 ENVIRONMENTAL PRECAUTIONS

Avoid release to sewers , public waters, drains or groundwater. Avoid release to the environment. Collect all waste in suitable and labelled containers and dispose according to local legislation.

6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

Method for cleaning up: *Small quantities can be removed with vacuum cleaners.*

Larger quantities shall be swept together and shovelled up.

Bag and transfer to properly labelled containers.

Ventilate area and wash spill site after material pickup is completed. This material and its container must be disposed of in a safe way as per local legislation.

Other information: *If product is contaminated, use PPE and containment appropriate to the nature of the most toxic chemical/material in the mixture. Dispose of materials or solids residues at an authorised site.*

6.4 REFERENCE TO OTHER SECTIONS

For further information refer to sections 8 (PPE) and 13 (Disposal).

SECTION 7: HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

Protective measures: *Wear personal protective equipment (see Section 8).*

Measures to prevent fire: *This product is non-flammable; no special fire protection measures are necessary.*

Measures to prevent dust generation: *Reseal packaging when not in use.*

Use engineering measures (e.g. local dust extraction) to provide effective control of dust from dry product or aerosol particulates in order to ensure compliance with the current Occupational Exposure Limits.

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Measures to protect the environment: *Do not dispose of excess material or spillages into the drains.*

Advice on general occupational hygiene: *Wash hands after use and regularly during use especially if contaminated.*

In working areas do not eat, drink or smoke when using this product.

Remove contaminated clothing and protective equipment before entering eating areas.

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

Handling and operation: *FIRE EXTINGUISHER :*

Follow operational instructions on label.

For use only on class A, B or C fires.

Safe for use on live electrical equipment up to 1000V.

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.*

Incompatible products: *Contents incompatible with strong oxidizing agents and strong acids. Do not store in high humidity. Do not combine with chlorine compounds. Do not mix with other extinguishing agents, particularly BC (Sodium Bicarbonate), PK (Potassium Bicarbonate) or Monnex (Potassium Allophanate) powders. Do not mix with alkalis or alkalizing substances.*

Storage temperature: *-30°C to + 60°C*

Storage area: *Contents under pressure – inspect for extinguisher rust or damage periodically to ensure container integrity.*
Pressurized extinguishers should be safely stored and secured to prevent falling or being knocked over.

7.3 SPECIFIC END USES (S)

Only for use as a **fire** *extinguisher. (See* **section 1***) .*

Observe instructions for use.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

8.1.1 National occupational exposure & biological limit values

The mixture contains mica in a proportion of < 5 wt.%. No substance-specific occupational exposure limits have been established for mica in the countries of the DACH region (Germany, Austria, Switzerland). Exposure assessment is therefore based on the general dust limits according to national regulations.

Germany (TRGS 900 - General Dust Limit)

CAS No.	Chemical Name	Dust Fraction	Limits	Until
12001-26-2	Glimmer (Mica)	Inhalable Fractions (E-Dust)	10 mg/m³	AGW, 8 h TWA
12001-26-2	Glimmer (Mica)	Respirable Fraction (A-Dust)	1,25 mg/m³	AGW, 8 h TWA

Note:

No separate occupational exposure limit has been established for mica. The assessment is carried out according to TRGS 900 using the general dust limits for non-toxic, insoluble dusts.

Austria (Limit Values Ordinance - GKV)

No substance-specific limit values have been established for mica. The general dust limits for non-toxic, insoluble dusts according to the Limit Values Ordinance and occupational health practice apply

Switzerland (SUVA - MAK values)

There are no separate MAK values for mica.

Exposure assessment is carried out in accordance with the SUVA limit value concept within the framework of the hazard assessment, applying the general limit values for mineral or inert dusts

Chemical name	Type	Exposure Limit Values	Source
Carbon Dioxide (Propellant for Gas cartridge extinguishers only)	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 reland 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.

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8.1.5 Control banding — *No additional information available.*

8.2 EXPOSURE CONTROLS

8.2.1 Appropriate engineering controls

Appropriate engineering controls: *Periodically check that the fire extinguisher is pressurised (pointer in green zone for stored pressure models) or check content weight for CO2 gas cartridge extinguishers or external gas cylinder pressure depending on model*

When handling the mixture / ABC agent - If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn in accordance with requirements.

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).

For Fire extinguishers maintenance or handling the ABC Dry Chemical The Following Guidelines apply:

8.2.2.1 Eye and face protection

Eye protection: *Wear eye protection.*

Physical state: *Solid/powder*			
Type	*Field of application*	*Characteristics*	*Standard*
Safety goggles, safety glasses		*With side shields*	*EN 166*

8.2.2.2 Skin protection

Skin and body protection: *Wear suitable protective clothing.*

Hand protection: *Wear appropriate gloves when handling this material. A pair of gloves made from the following material(s) are recommended: Butyl rubber. Chemical resistant PVC (according to EN 374 or equivalent)*

Hand protection					
Type	*Material*	*Permeation*	*Thickness (mm)*	*Penetration*	*Standard*
Disposable gloves, Reusable gloves					*EN ISO 374*

Other skin protection:

Materials for protective clothing: *Wear personal protective equipment. Chemical resistant safety shoes.*

Keep suitable chemically resistant clothing readily available for emergency use.

8.2.2.3 Respiratory protection

Respiratory protection: *In case of high and long-lasting dust contamination use a dust, mask or wear suitable respiratory equipment. Recommended filter type A2/P2.*

8.2.2.4 Thermal hazards — *Wear thermal protective clothing when necessary.*

8.2.3 Environmental exposure controls

Environmental Exposure Controls: *Contain spills and unnecessary release to the environment. Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point. Ensure all national/local regulations are observed.*

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Extinguishing agent – ABC Dry Chemical	
Physical state	*Powder*
Colour	*Blue or yellow*
Odour	*Odourless*
Odour threshold	*No data available*
pH	*4-4.5 (10% suspension in water) DIN ISO 787/9*
Relative evaporation (butyl acetate =1)	*No data available*
Melting point °C	*$NH_4H_2PO_4$: >197 Note: $NH_4H_2PO_4$ is Monoammonium Phosphate*
	$(NH4)_2SO_4$: >280 Note: $(NH4)_2SO_4$ is Ammonium Sulphate
Boiling Point °C	*No data available*
Flash Point °C	*Not applicable*
Autoignition temperature °C	*No data available*
Decomposition temperature °C	*No data available*
Flammability (solid, gas)	*Not applicable*

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Vapour pressure 20°C (kPa)	*No data available*
Relative vapour pressure at 20°C (kPa)	*No data available*
Density g/cm³ @ 20°C	*Approx. 1.8g/mL*
Solubility	*>90% after several hours (product is silicone coated, not immediately soluble)*
Partition coefficient n-octanol/water (log Kow)	*No data available*
Kinematic viscosity at 20°C (mm²/s)	*No data available*
Explosive properties	*No data available*
Oxidising properties	*No data available*
Explosive limits	*No data available*

Information on basic physical and chemical properties – propellant

Propellant – Nitrogen : Stored Pressure Extinguishers and Mobile Extinguisher with external N2 cylinder	
Appearance	*Colourless*
Odour:	*Odourless*
pH	*Not applicable*
Melting Point °C	*Not applicable*
Density (at 20°C): g/cm³	*0.0013*
Flash Point (°C)	*Non-flammable*
Explosive of Oxidizing Properties	*None*
Water Solubility (g/l)	*N/A*
Flammability Range (Vol% In Air):	*Non-flammable*
Propellant - Carbon Dioxide – Gas cartridge type extinguishers	
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

Carbon Dioxide (Propellant) — *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 ambient temperatures and 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 (see section 7). Avoid storage near incompatibles, humidity or moisture.*

10.5 INCOMPATIBLE MATERIALS — *Strong alkalis, magnesium, swimming pool sanitizers (inorganic perchlorates, sodium dichloro- isacyanurate dehydrate, trichloro-isacyanuric acid, calcium hypochlorite, and other strong oxidizers). Do not mix with other extinguishing agents, particularly potassium bicarbonate and sodium bicarbonate-based agents (BC, PK, Monnex). Do not mix with alkalis or alkalizing substances.*

10.6 HAZARDOUS DECOMPOSITION PRODUCTS — *Under normal conditions of storage and use, hazardous decomposition products should not be produced. When used of a fire Ammonia (NH_3) and/or phosphorous oxides and carbon oxides can evolve at very high temperatures.*

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SECTION 11: TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

Ingredient (**)	*Monoammonium Phosphate*	*Ammonium Sulphate*	*Mica*	*Methyl H Polysiloxane*	*Amorphous Silica*
Acute toxicity (oral) LD-50	*>2,000 mg/kg (rat)*	*>4,250 mg/kg (rat)*	*(1)*	*(1)*	*(1)*
Acute toxicity (dermal) LD-50	*> 5,000 mg/kg (rat)*	*> 2,000 mg/kg (rat)*	*(1)*	*(1)*	*(1)*
Acute toxicity (inhalation) LC-50	*> 5,000 mg/m³ (rat)*	*(1)*	*(1)*	*(1)*	*(1)*
Skin corrosion / irritation	*(1)*	*(1)*	*(1)*	*(1)*	*(1)*
Serious eye damage / irritation	*(1)*	*(1)*	*(1)*	*(1)*	*(1)*
Respiratory or skin sensitisation	*(1)*	*(1)*	*(1)*	*(1)*	*(1)*
Ingestion	*(1)*	*(1)*	*(1)*	*(1)*	*(1)*
Germ cell mutagenicity	*(1)*	*(1)*	*(1)*	*(1)*	*(1)*
Carcinogenicity	*(1)*	*(1)*	*(1)*	*(1)*	*(1)*
Reproductive toxicity	*(1)*	*(1)*	*(1)*	*(1)*	*(1)*
STOT-single exposure	*(1)*	*(1)*	*(1)*	*(1)*	*(1)*
STOT-repeated exposure	*(1)*	*(1)*	*(1)*	*(1)*	*(1)*
Aspiration hazard	*(1)*	*(1)*	*(1)*	*(1)*	*(1)*

No environmental hazard is anticipated providing the material is handled and disposed of with due care and attention.
(**) All data shown from material SDS in accordance with appropriate methods. (1) 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

Ammonium Sulphate				
Parameter	*Value*	*Exposure Time*	*Species*	*Method*
LC_{50}	*53 mg/L*	*96 hours*	*Fish*	
EC_{50}	*169 mg/L*	*48 hours*	*Daphnia*	
Monoammonium Phosphate				
Parameter	*Value*	*Exposure Time*	*Species*	*Method*
LC_{50}	*>100 mg/L*	*96 hours*	*Fish*	*OECD 203*
EC_{50}	*>100 mg/L*	*48 hours*	*Daphnia*	*OECD 202*

12.2 PERSISTENCE AND DEGRADABILITY
Degrades rapidly in humid/wet environments.

12.3 BIOACCUMULATIVE POTENTIAL
Low

12.4 MOBILITY IN SOIL
Slow evaporation rate; water soluble, may leach to groundwater

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.

12.6 ENDOCRINE DISRUPTING PROPERTIES
This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7 OTHER ADVERSE EFFECTS
Fertilizing effect possible. Water pollution class 1 (slightly polluting substance)

SECTION 13: DISPOSABLE INFORMATION

13.1 WATER TREATMENT METHODS

ABC Firefighting Powder

Recovery: *By brushing and aspiration. See section 6 and 8.*

Neutralisation: *Not necessary.*

Disposal instructions: *Normally as fertilizer through an approved specialized company*

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	according to local and current authority regulations. Reference European List of Waste (LoW) EC 2000/532 as amended- Appendix A – A1.4 The List of Waste – Code 16 -05 Gases in pressure containers and discarded Chemicals - No. 16 05 09 (Discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08).
Waste from residues / unused products:	*Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.*
Contaminated packaging:	*Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.*
To avoid:	*See sections 7 and 8.*

CO_2 Gas Cartridges or Nitrogen Cylinder

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.*
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.*
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 CO2 gas cartridge / or external N2 cylinder connected to extinguisher use UN1044. See (A)
When pressurised CO_2 gas cartridge or external N_2 are shipped separately - see (B) and (C) below.

(a) Fire Extinguishers (b) CO_2 Gas Cartridge (c) N_2 External Cylinder

14.1 UN Number or ID Number (*)

UN-No. (ADR):	*UN1044.*	*UN1013.*	*UN1066*
UN-No. (IMDG):	*UN1044.*	*UN1013.*	*UN1066*
UN-No. (IATA):	*UN1044.*	*UN1013.*	*UN1066*
UN-No. (ADN):	*UN1044.*	*UN1013.*	*UN1066*
UN-No. (RID):	*UN1044.*	*UN1013.*	*UN1066*

14.2 UN Proper Shipping Names (*)

Proper shipping names. (ADR):	*Fire Extinguishers.*	*Carbon Dioxide*	*Nitrogen*
Proper shipping names. (IMDG):	*Fire Extinguishers.*	*Carbon Dioxide*	*Nitrogen*
Proper shipping names. (IATA):	*Fire Extinguishers.*	*Carbon Dioxide*	*Nitrogen*
Proper shipping names. (ADN):	*Fire Extinguishers.*	*Carbon Dioxide*	*Nitrogen*
Proper shipping names. (RID):	*Fire Extinguishers.*	*Carbon Dioxide*	*Nitrogen*

14.3 Transport Hazard Class(es) (*)

ADR – Transport hazard class(es):	*2.2.*	*2.2.*	*2.2*
IMDG – Transport hazard class(es):	*2.2.*	*2.2.*	*2.2*
IATA – Transport hazard class(es):	*2.2.*	*2.2.*	*2.2*
ADN – Transport hazard class(es):	*2.2.*	*2.2.*	*2.2*
RID – Transport hazard class(es):	*2.2.*	*2.2.*	*2.2*

14.4 Packing Group (*)

Packing group ADR:	*Not applicable.*	*Not applicable.*	*Not applicable*
Packing group IMDG:	*Not applicable.*	*Not applicable*	*Not applicable*
Packing group IATA:	*Not applicable.*	*Not applicable*	*Not applicable*
Packing group ADN:	*Not applicable.*	*Not applicable*	*Not applicable*
Packing group RID:	*Not applicable.*	*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.*

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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 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*

15.1.2 National Regulations

Germany – National Regulations	*Water hazard class - WGK 1, slightly polluting substance.*

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*
CAS No.	*Chemical Abstract Service Number*
CLP	*Classification Labelling Packaging Regulation: Regulation (EC) No. 1272/2008*
DNEL	*Derived-No Effect Level*
EC No.	*European Community number*
EN	*European standard*
GHS	*Globally Harmonised System of Classification and Labelling of Chemicals*
IATA	*International Air Transport Association Dangerous Goods Regulations*
IMDG	*International Maritime Code for Dangerous Goods*
LoW	*List of Waste*
IMO	*International Maritime Organization*
PBT	*Persistent Bio Accumulative Toxic*
PNEC	*Predicted No Effect Concentration.*
PNEL	*Predicted No Effect Level*
REACH	*Registration, Evaluation, Authorisation and Restriction of Chemicals Regulations (EC Regulation 1907/2006)*
RID	*Regulation Concerning the International Transport of Dangerous Goods by Rail*
SDS	*Safety Data Sheet*
vPvB	*Very Persistent and Very Bio Accumulative*
WGK	*Water Hazard Class*
STOT	*Specific Target Organ Toxicity*
WEL	*Workspace Exposure Limit*

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.*

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

(*) Only applies when extinguisher is pressurised with propellant for stored pressure models, external N2 cylinder for mobile extinguisher models and CO_2 gas cartridges containing propellant.

END OF SDS