

Carbon dioxide (solid) Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)

1. Name of the substance or mixture and of the undertaking

1.1. Product Identifier

Name: Carbon dioxide (solid)
EC No.: 204-696-9
CAS No.: 124-38-9
Molecular formula: CO₂
Synonym: Dry ice
Registration status: Listed in APPENDIX IV/V REACH (exceptions to the obligation for registration referred to in Article 2 (7))

1.2. Relevant identified uses of the substance or mixture and uses that are discouraged

1.2.1. Relevant Identified Uses

Specification of Industrial/Professional Use: Cryogenic Purification Refrigerant

1.2.2. Uses that are not recommended

No data available

1.3. Details of the supplier providing the safety data sheet

Dry-Ice-Energy GmbH
Gabriel-von-Seidl-Str. 11
82031 Grünwald
Phone: 030-364280-120 – Fax: 030-364280-129
info@DryIceEnergy.com www.DryIceEnergy.com

1.4. Emergency number

Poisoning Information Center

2. Possible dangers

2.1. Classification of the substance or mixture

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

Not classified as a hazardous substance

Dry-Ice-Energy GmbH
Gabriel-von-Seidl-Str. 11
D-82031 Grünwald

Administration Office Berlin
Wiebestraße 36-37
10553 Berlin
T +49 (0) 30-364280-120
F +49 (0) 30-364280-129

Manager
Dipl. Betriebswirt Gerhard Weger
Dipl.-Kfm. Gernot Schnettler
HRB 203331
District Court of
Munich DE
283322086
info@DryIceEnergy.com
www.DryIceEnergy.com

Deutsche Bank AG
Dusseldorf
IBAN DE 71 300700 240 521615500
BIC DEUT DE DB DUE

Kreissparkasse
Munich Starnberg
IBAN DE98702501500022879324
BIC BYLADEM1KMS

Side 2 from

2.1.2. Classification according to Directive 67/548/EEC or 1999/45/EC

Unclassified

2.1.3. Harmful physicochemical effects, harmful effects on human health and the environment

No data available

2.2 Marking elements

2.2.1. Marking according to Regulation (EC) 1272/2008 [CLP/GHS]

No labeling required

2.2.2. Labelling according to Directive 67/548/EEG or 1999/45/EC

Symbol: The product does not need to be labelled in accordance with Directive 67/548/EEC.

2.3. Other hazards

Other hazards: Dry ice sublimates (evaporates) at room temperature and displaces the air we breathe (heavier than air) in closed rooms and therefore has a suffocating effect in high concentrations. Cryogenic solidified gas (-78.5°C). Contact with the product can cause cold burns or frostbite!

3. Composition/Indications Ingredients

3.1. Substances

Name	Product Identifier	%	Classification according to Directive 67/548/EEC
Carbon dioxide (solid)	(CAS No) 124-38-9	> 99.5	
(Principal Constituent)	(EG Nr.) 204-696-9		

Name	Product Identifier	%	Classification according to Regulation (EC) Nr. 1272/2008 [CLP/GHS]
Carbon dioxide (solid)	(CAS No) 124-38-9	> 99.5	
(Principal Constituent)	(EG Nr.) 204-696-9		

For the full text of the classification code and/or H-phrase, see section 16

3.2. Farragoes

Not applicable

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4. First Aid Measures

4.1. Description of first aid measures

First aid measures after inhalation	Take the affected person out into the fresh air and calmly store. If unconscious, place in a stable lateral position and seek medical advice
First aid measures after skin contact not	In case of frostbite, rinse with plenty of water. Clothing Remove. Consult a doctor.
First aid measures after eye contact	In case of contact with eyes, immediately when the Rinse the eyelid gap with running water for 10 to 15 minutes.
First aid measures after ingestion	If swallowed, rinse mouth with water (only if the victim is conscious).

4.2. Main acute and delayed symptoms and effects

Symptoms/Damage The gas can have a suffocating effect in high concentrations.
 Symptoms: headache, nausea, vomiting, dizziness.

4.3. Indications of immediate medical assistance or special treatment

No data available

5. Firefighting measures

5.1. Extinguishing agent

Suitable extinguishing agents: For extinguishing: all extinguishing agents permitted

5.2. Specific hazards posed by the substance or mixture

Fire:

Non-flammable

Dangerous burn points:

none

5.3. Instructions for firefighting

Other information (firefighting): Remove the container from the effective area of the fire if it is safe to do

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Side 4 from
so. Use a water spray jet or water mist to knock down smoke

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6. Measures to be taken in the event of accidental release

6.1. Personal precautions, protective equipment and procedures to be followed in case of emergencies

6.1.1. For personnel who are not emergency personnel

Protective equipment: Wear protective gloves/clothing and ensure adequate ventilation.

6.1.2. For First Responders

Protective equipment: Wear suitable respirators, protective gloves/protective clothing

6.2. Environmental

Not applicable

6.3. Methods and materials for retention and cleaning

Cleaning procedure: Ventilate the affected area.

6.4. Reference to other sections

(see Chapters 7 and 8).

7. Handling and storage

7.1. Protective measures for safe handling

Protective measures for safe handling: Obtain special instructions before use.

7.2. Conditions for safe storage, taking into account incompatibilities

Storage temperature: < 50° C

Bearing: Store in a cool place in a well-ventilated place. Keep away from sunlight and do not expose to temperatures greater than 50°C/122°F.

Packaging: Only in the original container or **not hermetically sealed** containers.

7.3. Specific end-use applications

No data available.

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8. Exposure Limitation and Monitoring/Personal Protective Equipment

8.1. Parameters to be monitored

Carbon dioxide (solid) (124-38-9)

European Union	IOELV TWA (mg/m ³)	9000 mg/m ³	5000 ppm
Belgium	Short-term	9131 mg/m ³	5000 ppm
Belgium	value limits	54784 mg/m ³	30000 ppm
France	VME (mg/m ³)	- (mg/m ³)	5000 ppm
Germany	TRGS 900 Occupational Exposure	9100 (mg/m ³)	5000 ppm
Italy – Portugal – USA ACGIH	ACGIH TWA (mg/m ³)	- (mg/m ³)	5000 ppm
Italy – Portugal – USA ACGIH	ACGIH STEL (mg/m ³)	- (mg/m ³)	30000 ppm
The Netherlands	MAC TGG 8H	9000 (mg/m ³)	- ppm
Australia	SET	- (mg/m ³)	10000 ppm

8.2. Exposure limitation and monitoring

Appropriate technical control devices: Provide general and local extraction. Ensure that concentrations of the product in the ambient air are sufficiently below the occupational exposure limit (if any). Use oxygen detectors in case asphyxiating gases can be emitted.

Personal Protective Equipment:
7.

See protective measures under points 6 and
Protective gloves with cold insulation.

Skin and body protection:

Wear appropriate protective clothing at work.

Respiratory:
ventilation.

Wear respiratory protection in case of insufficient

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

State of matter:	Firm
Color:	white
Smell:	Rumorlos
Melting point:	- 57° C
Boiling point:	- 78.5° C
Vapor pressure:	57300 hPa
Relative Density:	0,82
Relative Gas Density:	1,5
Critical Temperature:	30° C
Critical Pressure:	74803 hPa
Solubility in water:	2000 mg/l

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9.2. Other particulars

No data available.

10. Stability and reactivity

10.1. Reactivity

No data available

10.2. Chemical stability

The product is stable under normal handling and storage conditions

10.3. Possibility of dangerous reactions

No data available

10.4. Conditions to avoid

No data available

10.5. Incompatible materials

No data available

10.6. Dangerous decomposition points

No data available

11. Toxicological claims

11.1 Information on toxicological effects

Other information: The gas can have a suffocating effect at high concentrations. Symptoms: headache, nausea, vomiting. This can lead to loss of consciousness or possibly be fatal.

12. Environmental claims

12.1. Toxicity

Ecology – general: does not cause environmental

damage Avoid Ecology: soluble

Carbon dioxide (solid) (124-38-9)

LC50 Pisces 1 35 mg/l (Salmo Gairdneri/Onchorhynchus Mykiss)

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12.2. Persistence and degradability

No data available

12.3. Bioaccumulation potential

carbon dioxide (solid) (124-38-9)

Bioaccumulation potential: Non-bioaccumulative

12.4. Mobility in the ground

No data available

12.5 Results of PBT and vPvB assessment

No data available

12.6. Other Adverse Effects

Other information (adverse effect): Potential greenhouse effect. Not dangerous to the ozone layer

13. Notes on disposal

13.1. Waste treatment process

Ecology – waste materials:

Avoid the release of large quantities into the environment. Do not allow it to flow into sewers, cellars, work pits and similar places where the accumulation of the gas could be dangerous. Ask the supplier for specific recommendations.

14. Transport details

Non-hazardous product according to transport regulations (ADR/RID)

Conditions to avoid: Do not store dry ice in rooms without ventilation, such as passenger compartments. Ensure adequate ventilation.

15. Legislation

15.1. Safety, health and environmental protection requirements/specific legislation for the substance or mixture

15.1.1. EU rules

No restrictions on use

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15.1.2. National rules

Comply with all national/local regulations

15.2. Chemical safety assessment

A Chemical Safety Assessment (CSA) does not need to be prepared for this product

16. Other particulars

Other information: Choking in high concentration
May cause frostbite or cold burns Store container in a well-ventilated place
Do not inhale gas
The risk of suffocation is often overlooked and needs to be emphasized when training employees

To the best of our knowledge, the information in this safety data sheet corresponds to our findings at the time of printing. The information is intended to provide you with information on the safe handling of the product mentioned in this safety data sheet during storage, processing, transport and disposal. The information is not transferable to other products. Insofar as the product is mixed, mixed or processed with other materials, or is subjected to any other processing, the information in this safety data sheet cannot be transferred to the new material thus manufactured, unless expressly stated otherwise.

Disclaimer

The information in this document is based on the current state of knowledge, does not give any guarantee for completeness and does not constitute a contractual assurance of product characteristics. Before using the product, a careful examination of material compatibility and safety should be carried out.

Updated version from 21.04.2021

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