

SAFETY DATA SHEET

(According to EEC Directive 91/155/EEC and amendments)

CARBON DIOXIDE 100% CO₂ (Code 962-109)

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: CARBON DIOXIDE 100% CO₂ (Code 962-109)
Application: For in vitro diagnostic use Container size: Compressed gas cylinder, 0.525 l
Supplier:

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical name:</u>	<u>CAS-number:</u>	<u>%:</u>	<u>Hazard classification:</u>
Carbon dioxide	124-38-9	100	None

3. HAZARDS IDENTIFICATION

Can cause frostbite due to rapid evaporation. High atmospheric concentrations can cause severe breathing difficulties. In serious cases risk of unconsciousness.

4. FIRST-AID MEASURES

Inhalation: Move injured person into fresh air and keep person calm under observation. If necessary, seek hospital and bring along these instructions. Serious cases: Unconscious persons must be locked on their side, head low and kept warm. Call ambulance. Bring along these instructions.

Skin contact: Frostbite: Do not remove clothes, but flush with copious amounts of lukewarm water. Call ambulance. Continue flushing during transport to hospital.

Eye contact: Immediately flush with plenty of lukewarm water. Remove any contact lenses and open eyelids widely. Call ambulance. Continue flushing during transport to hospital. Bring along these instructions.

Ingestion: Immediately rinse mouth and drink plenty of liquid. Keep person under observation. If uncomfortable: Seek hospital and bring along these instructions.

5. FIRE-FIGHTING MEASURES

Extinguishing media: The product is non-combustible.
Use fire-extinguishing media appropriate for surrounding materials.
Cool containers exposed to heat with water spray and remove container, if no risk is involved.

Specific hazards: Containers can burst violently when heated, due to excess pressure build-up.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: If leakage occurs, turn off the supply and provide good ventilation. If necessary, use air-supplied breathing apparatus.

Environmental precautions: None specific.

Methods for cleaning up: Leaking cylinders should be moved to an area with good ventilation.

7. HANDLING AND STORAGE

Handling: Observe good industrial hygiene practices.

Storage: Store in a cool fire-proof place.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering measures: Provide adequate ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation.

Occupational exposure limits:

<u>Chemical name:</u>	<u>Exposure limits:</u>	<u>Reference:</u>
Carbon dioxide	5000 ppm	ACGIH (USA, 2002), OSHA (USA, 2002), Danish TLV (2002)

Personal protection: Insulating gloves and goggles are recommended.
In case of inadequate ventilation: Use suitable air-supplied respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Colourless gas
Odour:	Pungent
pH:	Not available
Melting point:	- 56.6° (sublimates)
Boiling point:	Not available
Decomposition temperature:	Not available
Flash point:	Not available
Explosion properties:	Not available
Vapour pressure:	Not available
Vapour density:	1.5 (air = 1)
Density:	Abt. 1.9 g/l
Solubility:	Not available
Other:	Not available

10. STABILITY AND REACTIVITY

Stability: Stable.

Conditions/materials to avoid: Reacts violently with sodium, potassium and magnesium.

Hazardous decomposition products: None.

11. TOXICOLOGICAL INFORMATION

Inhalation: Labored breathing, perspiration, severe breathing difficulties, headache, and dizziness. Causes unconsciousness and death at atmospheric concentrations above 10%

Skin contact: In case of frostbite: redness, pain, and serious burns.

Eye contact: In case of frostbite: redness, pain, and impaired vision.

Ingestion: Not likely.

Long-term effects: None known.

12. ECOLOGICAL INFORMATION

Mobility: Evaporates.

Degradability: Not relevant.

Ecotoxicity: Contributes to hothouse effect.

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13. DISPOSAL CONSIDERATIONS

Cylinders must be returned to the dealer.

EWC-code (European Waste Catalogue): 16 05 05

Abfallschlüsselnummern in Austria (ÖNORM S2100): 59802

14. TRANSPORT INFORMATION

UN-no.: 1013

Proper shipping name: CARBON DIOXIDE

Sea (IMDG)

Class: 2.2 **PG:** -
EmS: F-C, S-V

Land (RID/ADR)

Class: 2.2

Air (ICAO/IATA)

Class: 2.2 **PG:** -

15. REGULATORY INFORMATION

Labelling:

An assessment by Radiometer Medical ApS on May 9, 2005 has shown that according to EEC Directives 67/548/EEC and 99/45/EEC, the product is not liable to classification and labelling.

16. OTHER INFORMATION

Limitations/Restrictions:

The user must be instructed in the proper work procedure and be familiar with the contents of these instructions.
This SDS complies with the US ANSI standard (ANSI 2400.1-1993) and the international standard (ISO 11014-1).

The information on this data sheet represents our current data and is accurate to the best of our knowledge as to the proper handling of this product under normal conditions and in accordance with the application specified on the packaging and/or technical guidance literature. Any other use of the product which involves using the product in combination with any other product or any other process is the responsibility of the user.

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Prepared by:
RADIOMETER MEDICAL ApS

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