

SAFETY DATA SHEET

1. IDENTIFICATION OF THE PREPARATION AND THE COMPANY

PRODUCT NAME: Carbon Dioxide (CO₂)
PART NO: 6000642 & 6000643
COMPANY IDENTIFICATION: CLARKE INTERNATIONAL,
HEMNALL STREET, EPPING, ESSEX. CM16 4LG
BUSINESS TELEPHONE: 01992 565300
BUSINESS FAX: 01992 561562
EMERGENCY TELEPHONE: 020 89887400

2. COMPOSITION/INFORMATION ON INGREDIENTS:

Substance/ Preparation Substance
Components/Impurities Contains no other products and/or impurities which affect the product's classification
CAS No. 00124-38-9
EEC No. 204-696-9

3. HAZARDS IDENTIFICATION:

- Liquefied Gas
- High concentrations can cause asphyxia

4. FIRST AID MEASURES:

Inhalation High concentrations can cause asphyxia. Symptoms may include immobility and/or loss of consciousness. The person affected may not be aware that he/she is suffering from asphyxia.
Low concentrations of CO₂ can increase breathing frequency and cause headaches.
Move the patient to an uncontaminated area using breathing apparatus. Keep the patient lying down and warm. Call a doctor. If the patient stops breathing practise artificial respiration.

Contact with skin and eyes Immediately wash the eyes with water for at least 15 minutes. In case of ice burns, spray with water for at least 15 minutes. Apply a sterile gauze. See a doctor.

Swallowing Very unlikely for this product.

5. FIRE FIGHTING MEASURES:

Specific risks If exposed to bare flames the container may rupture and explode.
Not flammable

Hazardous combustible products None

Means of extinguishing fire All known fire extinguishing methods may be used

Specific fire extinguishing methods Stop the leakage where possible.
Move the container to a safe area and cool with water from a protected position.

Special protective measures Use breathing apparatus in confined spaces.

6. ACCIDENTAL RELEASE MEASURES:

Personal safety measures Evacuate the area.
Use breathing apparatus when entering the area affected by the spillage unless the air has been proved to be breathable.
Ensure that the area is adequately ventilated.

Environment protection Try and stop spillage
Prevent from entering sewers, cellars, hollows and areas where build up could be hazardous

Product cleanup methods Ventilate area

7. HANDLING & STORAGE:

Handling and storage Avoid water being drawn into the container.
Avoid the reflux of gas in the container.
Use equipment specifically suited to the product, the pressure and

SAFETY DATA SHEET

the operating temperature only. If in doubt, check with the gas supplier.

Follow the supplier's instructions when handling the container.

Ensure that the container is kept at a temperature of below 50°C and in a well ventilated area.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION:

TLV exposure limits	5000ppm
Personal safety	Ensure adequate ventilation

9. PHYSICAL AND CHEMICAL PROPERTIES:

Molecular weight	44
Pour point	-56.6°C
Boiling point	-78.5°C
Critical temperature	30°C
Relative density, gas (air-1)	1.52
Relative density, liquid (water=1)	0.82
Vapour pressure at 20°C	57.3 bar
Solubility in water (mg/l)	2000 mg/l
Appearance	Colourless gas
Smell	None
Others	Gas/vapour heavier than air. Tends to build up in confined spaces especially at or below ground level.

10. STABILITY AND REACTIVITY:

Stability and reactivity	Stable under normal conditions
--------------------------	--------------------------------

11. TOXICOLOGICAL INFORMATION:

General Information	In low concentrations quickly causes breathing difficulty. Symptoms are headache, nausea and vomiting that can lead to unconsciousness.
---------------------	---

12. ENVIRONMENTAL POLLUTION

General Information	If disposed of in large quantities can favour greenhouse effect
Heating factor	1

13. DISPOSAL CONSIDERATIONS:

General information	Do not dispose of product where build up could be hazardous Dispose of in the open air in well ventilated area Avoid direct disposal of large quantities into the air Contact the supplier if instructions for use are required
---------------------	--

14. TRANSPORT INFORMATION:

UN no.	1013
Class/Div.	2.2
ADR/RID no.	2.5a
ADR/RID hazard no.	20
Tremcard no.	11
Groupcard no.	20g16
ADR labelling	Label 2: non-flammable, non-toxic gas
Other information concerning Transport	Avoid the use of vehicles which do not have a separate driver's cab Ensure that the driver is informed as to the potential hazard risk of the product and how to proceed in the case of accident or emergency Before transporting ensure that the product is well secured and that: - the valve on the gas cylinder is tightly closed and does not leak; - the blind nipple on the valve (if provided) is mounted correctly; - the cap nut (if provided) is mounted correctly; - the cargo area is suitably ventilated; - all current regulations are complied with

15. REGULATORY INFORMATION:

Number in attachment 1 of Dir 67/548	Not included in attachment 1
EEC Classification	Proposal forwarded by the Industrial Trade Association Not classified as a hazardous substance

SAFETY DATA SHEET

Labelling of containers

Symbols

Hazard warnings

Suggested precautions

Label 2: non-flammable, non-toxic gas

Symbols forseen by the ADR are used

High concentrations of RAs can cause asphyxia

S9 Store container in a well ventilated area

S23 Do not inhale gas

16. OTHER INFORMATION:

Ensure compliance with all national and regional regulations.

The risk of asphyxia is often underestimated and must be stressed during operator training.

Contact with liquid can cause ice burns.

Before using this product in any new process or experiment, thorough research must be carried out regarding the safety and the compatibility of the product with the materials in question.

The information contained in this document is valid at the time of printing. The company is not responsible for any damage caused by the misuse of the product and/or for using the product under conditions other than those indicated on the safety sheet.

Main source of data used to compile the Safety Sheet: EIGA data bank.

Last updated: 25.11.08