THE GAS MAN

Co2 & Mixed Gas to the Licensed trade
Welding Gas, Propane/Butane & Helium

Carbon Dioxide MSDS Nr. 300-00-0032 Gas Safety Data Sheet

1. Identification of the Substance/Preparation/Company Information.

Product Name Carbon Dioxide Chemical formula CO2

Emergency phone number 07940 080609

2. Composition/Information on Ingredients

Substance /Preparation Substance

Components/Impurities Contains no other components or impurities which will influence the classification of the

product.

CAS Nr 00124-38-9 EEC Nr (from EINECS) 2046969

3. Hazards Identification

Hazards identification Liquefied gas. In high concentrations may cause asphyxiation.

4. First Aid Measures

Inhalation Low concentrations of CO2 cause increased respiration and headache. 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 stops.

Skin/eye contact Immediately flush eyes thoroughly with water for at least 15 minutes. In case of a cold burn

spray with water for at least 15 minutes. Apply a sterile dressing. Obtain medical assistance.

Ingestion Ingestion is not considered a potential route of exposure.

## 5. Fire Fighting Measures

Specific hazards Exposure to fire may cause cylinders to rupture/explode. Non - flammable.

Hazardous combustible products None.

Suitable extinguisher media All known extinguishers can be used.

Specific methods If possible, stop flow of product. Move cylinder away or cool with water from a protected

position.

Special protective equipment In a confined space use self-contained breathing apparatus.

for fire fighters

## 6. Accidental Release Measures

Personal precautions Evacuate the area. Wear self-contained breathing apparatus when entering area unless

atmosphere is proved to be safe, i.e. oxygen concentration is 21% +/- 2% and $CO_2$ concentration

is less than 1.5%. Ensure adequate air ventilation.

Small release For a leaking cylinder, try to stop release by closing the valve if safe to do so.

Major release Evacuate the area immediately.

(e.g. bursting disc activation) Cylinder bursting disc activation will be evident by a sudden noise accompanied by a prolonged

discharge of product seen as a white vapour. Frost may be seen on the cylinder. The cylinder

should be left to discharge and The Gas Man be contacted.

Environmental precautions Prevent from entering low lying areas where its accumulation can be dangerous, e.g. cellars.

Clean up methods Ventilate area.

## 7. Handling and Storage

Handling and storage Cylinders should be secured when stored or in use. Only use cylinders when in an upright

position. Suck back of water into the cylinder must be prevented. Do not allow back feed

into the cylinder. When cylinder valves have been exposed to flooding in cellars, the cylinder must not be used and The Gas Man notified for collection. Do not store cylinders adjacent to direct heat sources or within sealed rooms where ambient heat may build up. Keep cylinders below 50 degrees centigrade. Failure to do so may cause the bursting disc to rupture (see major release above). Store in a well ventilated place, and if this is not possible conduct a confined risk assessment. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Only open the cylinder valve when connected to equipment. Open and close valve slowly. Close cylinder valve when not in use.

8. Exposure Controls/Personal Protection

Exposure limits (Great Britain) Carbon Dioxide Occupational Exposure Standard (OES)

Short Term Exposure Limit (STEL) 1500vpm

Long Term Exposure Limit (LTEL) 5000vpm

(EH 40/2002)

Personal protection Ensure adequate ventilation to keep below exposure limits.

9. Physical and Chemical Properties

Molecular weight 44 Melting Point -56.6 degrees centigrade

Boiling Point -78.5(s) degrees centigrade Critical Temperature 30 degrees centigrade

Relative density, gas 1.52 (air=1) Gas/Vapour heavier than air. May accumulate in confined spaces, particularly at or

below ground level.

Relative density, liquid 0.82 (water=1) Vapour Pressure 20 degrees cent. 57.3 bar

Solubility mg/ 1 water 200 mg/1 Appearance /Colour Colourless Gas.

Odour No odour warning properties.

10. Stability and Reactivity

Stability and reactivity Stable under normal conditions.

## 11. Toxicology Information

General Carbon Dioxide is mildly toxic, with no cumulative effects. High concentrations cause rapid circulatory insufficiency. Symptoms are headache, nausea and vomiting, which may lead to unconsciousness.

## 12. Ecological information

General When discharged in large quantities may contribute to the greenhouse effect.

Global warming factor 1.

## 13. Disposal Considerations

General Discharge to atmosphere in a well ventilated place. Do not discharge into a place where gas may accumulate. Discharge to atmosphere in large quantities should be avoided.

## 14. Transport Information

UN Nr 1013 Class/Div 2.2 ADR/RID Classification Code 2A ADR/RID Hazard Nr 20

Labelling ADR 2.2:non-flammale, non-toxic gas

Other transport information Avoid transport on vehicles where the load space is not separate from the driver's compartment. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an emergency.

Before transporting cylinders ensure that they are firmly secured and: cylinder valve is closed and not leaking, valve guard is correctly fitted, there is adequate ventilation, compliance with applicable regulations.

## 15. Regulatory Information

Number in Annex 1 of Dir 67/548 Not included in Annex 1.

EC Classification Not classified as a dangerous substance.

Labelling of cylinders - Symbols Label 2.2: non flammable non - toxic gas.

16. Other Information Ensure all national/local regulations are observed. For beverage dispense only.

Cylinder Volume Reference Chart

| Nominal wt of gas (kg) | Cylinder Size (cm) Diam. | Height | Approx Cylinder Weight (kg) | Gross weight of Cylinder + gas (kg) | Nominal Gas Volume (m3) |
|---|---|---|---|---|---|
| 3.15 | 14.0 | 50 | 7 | 10.15 | 1.7 |
| 6.35 | 14.0 | 83 | 15 | 21.35 | 3.4 |
| 6.35 | 16.6 | 62.8 | 12 | 18.35 | 3.4 |
| 34.0 | 23.0 | 149.5 | 65 | 99.0 | 18.2 |