



# Safety Data Sheet

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## ALIGAL 2

### 1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

**Commercial name** ALIGAL 2  
**Product name** Carbon Dioxide, food grade  
**Chemical name/formula** Carbon Dioxide / CO<sub>2</sub>  
**Company identification** See header and footer  
**Emergency phone no.** See footer

### 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 No.** 124-38-9

### 3. HAZARDS IDENTIFICATION

**General**

- Liquefied gas.
- In high concentrations may cause asphyxiation.

### 4. FIRST-AID MEASURES

**Inhalation**

- In high concentrations may cause asphyxiation. Symptoms may include loss of mobility or consciousness. Victim may not be aware of asphyxiation.
- Low concentrations of CO<sub>2</sub> may cause increased respiration and headache
- Remove victim to uncontaminated area wearing self-contained breathing apparatus.
- Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.

**Skin/Eye contact**

- Contact with liquid may cause cold burns or frost bite.
- Immediately flush eyes thoroughly with water for at least 15 minutes.
- In case of frostbite, 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 containers to rupture or explode.

**Hazardous combustion products**

- None.

**Suitable extinguishing media**

- All known extinguishants can be used.

**Specific methods**

- If possible, stop flow of product.
- Move container away or cool with water from a protected position.

**Special protective equipment (for fire fighters)**

- In confined space, use a self-contained breathing apparatus.

### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions**

- Evacuate area.
- Use protective clothing.
- Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.
- Ensure adequate air ventilation.

**Environmental precautions**

- Try to stop release.
- Prevent from entering sewers, basements and work pits or any place where its accumulation can be dangerous.

**Clean up methods**

- Ventilate area.

### 7. HANDLING & STORAGE

**General**

- Suck back of water into the container must be prevented. Do not allow back-feed into container.
- Use only properly specified equipment, which is suitable for this product, its supply pressure and temperature.
- Keep container below 50°C in a well-ventilated place.
- Refer to SOXAL's booklet on "safe handling, transport and storage of compressed gas cylinder" or contact SOXAL if in doubt.

### 8. EXPOSURE CONTROLS & PERSONAL PROTECTION

**Exposure limit value**

- 5,000 ppm PEL Short Term
- 30,000 ppm PEL Long Term (Singapore Factories Order 1996)

**Personal protection**

- Ensure adequate ventilation.

### 9. PHYSICAL & CHEMICAL PROPERTIES

**Molecular weight** 44  
**Melting point** - 56.6°C  
**Boiling point** - 78.5°C  
**Critical temperature** 30°C  
**Relative density, gas** 1.52 (air = 1)  
**Relative density, liquid** 1.03 (water = 1)  
**Vapour pressure @ 20°C** 57.3 Bar  
**Solubility mg/l water** 2000 mg/l  
**Appearance/Colour** Colourless gas  
**Odour** No odour warning properties  
**Auto-ignition temperature** Not applicable  
**Flammability range** Not flammable  
**Others** Gas/vapour is heavier than air. May accumulate in confined space, particularly at or below ground level.

For product and/or safety enquiry, please send, call, fax or log on to:

**SINGAPORE OXYGEN AIR LIQUIDE PTE LTD**  
16, Jalan Buroh, Singapore 619475.

Tel: (65) 6265 3788 or 6265 4555 Fax: (65) 6265 1441 or 6268 8403 Website: [www.soxal.com](http://www.soxal.com) Business Registration No: 197001157D

## ALIGAL 2

### 10. STABILITY & REACTIVITY

**General**

- Stable under normal conditions.

### 11. TOXICOLOGICAL INFORMATION

**General**

- In high concentrations, may cause rapid circulatory insufficiency. Symptoms are headache, nausea and vomiting, which may lead to unconsciousness.

### 12. ECOLOGICAL INFORMATION

**General**

- When discharge in large quantities, may contribute to greenhouse effect (global warming factor = 1).

### 13. DISPOSAL CONSIDERATIONS

**General**

- Do not discharge into any place where its accumulation could be dangerous.
- Discharge to atmosphere in large quantities should be avoided.
- Contact SOXAL if guidance is required.

### 14. TRANSPORT INFORMATION

**UN No.** 1013  
**Class/Division** 2.2 (Non-Flammable Gas)  
**Subsidiary risk** None  
**UN proper shipping name** Carbon Dioxide  
**IMO/IATA shipping label**



### Other transport information

- Avoid transport on vehicles where the load space is not separated 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 accident or an emergency.
- Before transporting product containers, ensure that they are firmly secured and:
  - compliance with applicable regulations;
  - cylinder valve is closed and not leaking;
  - valve outlet cap nut or plug (where provided) is correctly fitted;
  - valve protection device (where provided) is correctly fitted; and
  - there is adequate ventilation.

### 15. REGULATORY INFORMATION

**General**

- Singapore's WSH (General Provisions) Regulations 2006, Sections 42 & 43
- Singapore Standards:
  - CP 12:2000 Part 1
  - CP 98:2003
  - SS 152:2003
  - SS 286:1984 Part 1 to Part 5

**Risk and Safety phrases**

- S09 – Keep container in a well ventilated place.
- S51 - Use only in well ventilated area.

### 16. OTHER INFORMATION

**General**

- Ensure all local regulations or legislations are observed.
- Asphyxiant in high concentrations. Keep container in a well-ventilated place. Do not breathe gas.
- The hazard of asphyxiation is often overlooked and must be stressed before use.
- Contact with liquid may cause cold burns/frost bite.
- Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out.

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