



Safety Data Sheet

Document No: SOXAL/SDS/01
Revision No: Rev. 2
Revision Date: 01 Jan. 08
Issue/Print Date:

ACETYLENE

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Product name Acetylene, dissolved
Chemical name/formula Acetylene / C₂H₂
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. 74-86-2

3. HAZARDS IDENTIFICATION

General

- Dissolved gas.
- Extremely flammable.

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.
- In low concentrations, may cause narcotic effects. Symptoms may include dizziness, headache, nausea and loss of co-ordination.
- 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

- May cause temporary irritation to the eyes and dermatitis to the skin upon repeated exposures.

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

- Incomplete combustion may form carbon monoxide.

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.
- Do not extinguish a leaking gas flame unless absolutely necessary. Spontaneous or explosive re-ignition may occur.
- Extinguish any other fire.

Special protective equipment (for fire fighters)

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

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

- Evacuate area.
- Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.
- Ensure adequate air ventilation.
- Eliminate ignition sources.
- Post warning notices.

Environmental precautions

- Try to stop release.

Clean up methods

- Ventilate area.

7. HANDLING & STORAGE

General

- Ensure equipment is adequately earthed.
- Avoid contact with pure copper, mercury, silver and brass with greater than 70% copper.
- Suck back of water into the container must be prevented. Do not allow back-feed into the container.
- Purge air from system before introducing gas.
- Use only properly specified equipment, which is suitable for this product, its supply pressure and temperature.
- Keep away from ignition sources (including static discharges).
- Segregate from oxidant gases and other oxidants in store.
- 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

- None.

Personal protection

- Ensure adequate ventilation.
- Wear suitable hand, body and head protection. Wear goggles with suitable filter lenses when use is cutting or welding.
- Do not smoke while handling product.

9. PHYSICAL & CHEMICAL PROPERTIES

Molecular weight 26
Melting point - 80.8°C
Boiling point - 84°C (sublimes)
Critical temperature 35°C
Relative density, gas 0.9 (air = 1)
Relative density, liquid Not applicable
Vapour pressure @ 20°C 44 Bar
Solubility mg/l water 1185 mg/l

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 Business Registration No: 197001157D



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9. PHYSICAL & CHEMICAL PROPERTIES (continue)

Appearance/Colour	Colourless gas
Odour	Garlic like. Poor warning properties at low concentration
Auto-ignition temperature	325°C
Flammability range	2.4 – 88 volume % in air

10. STABILITY & REACTIVITY

General	<ul style="list-style-type: none">Can form explosive mixture with air.May decompose violently at high temperature and/or pressure or in the presence of a catalyst.Forms explosive acetylides with copper, silver and mercury. Do not use alloys containing more than 70% copper or 43% silver.Dissolved in a solvent supported in a porous mass.May react violently with oxidants.
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11. TOXICOLOGICAL INFORMATION

General	<ul style="list-style-type: none">No known toxicological effects from this product.
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12. ECOLOGICAL INFORMATION

General	<ul style="list-style-type: none">No known ecological effects from this product.
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13. DISPOSAL CONSIDERATIONS

General	<ul style="list-style-type: none">Do not discharge into areas where there is a risk of forming an explosive mixture with air.Waste gas should be flared through a suitable burner with a flash back arrestor.Do not discharge into any place where its accumulation could be dangerous.Contact SOXAL if guidance is required.
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14. TRANSPORT INFORMATION

UN No.	1001
Class/Division	2.1 (Flammable Gas)
Subsidiary risk	None
UN proper shipping name	Acetylene, dissolved
IMO/IATA shipping label	



Disclaimer:

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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	<ul style="list-style-type: none">Singapore's WSH (General Provisions) Regulations 2006, Sections 42 & 43.Singapore Standards:<ul style="list-style-type: none">CP 12:2000 Part 1CP 98:2003SS 152:2003SS 286:1984 Part 1 to Part 5
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Risk and safety phrases	<ul style="list-style-type: none">R5 - Heating may cause an explosion.R6 - Explosive with or without contact with air.R12 - Extremely flammable.S9 - Keep container in well-ventilated place.S16 - Keep away from ignition sources. No smoking.S33 - Take precautionary measures against static discharge.
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16. OTHER INFORMATION

General	<ul style="list-style-type: none">Ensure all local regulations or legislations are observed.Ensure operators or users understand the flammability hazard of this gas.The hazard of asphyxiation is often overlooked and must be stressed before use.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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