

MATERIAL SAFETY DATA SHEET

Acetylene (Gas)

PRODUCT AND COMPANY IDENTIFICATION

Product name	Acetylene (gas)
Chemical name	Acetylene
Chemical formula	C ₂ H ₂
Components	Hydrogen, Carbon
Impurities	Contains no other impurities which will influence the classification of the product
Company identification	CryoExpress Singapore Pte Ltd 1 Bukit Batok Crescent #05-15 WCEGA Plaza Singapore 658064
Telephone number	(65) 6561 5282

HAZARDS IDENTIFICATION

Hazards identification	High oxidizing gas. Greatly accelerates combustion rate.
Inhalation	High concentration may cause asphyxiation. Symptoms include headache, dizziness, drowsiness, poor coordination and unconsciousness.
Skin / Eye contact	May cause temporary irritation to the eyes and dermatitis to the skin upon repeated exposures.
Ingestion	Ingestion is unlikely to happen.

Product Information / Ingredients

Substance / Preparation	Substance
Components Impurities	Contain no other components or impurities, which will influence the classification of the product.
CAS No	74-86-2

FIRST AID MEASURES

Inhalation	Personnel should wear adequate personal protective equipment before entering exposed area. Remove victim to fresh air area. If victim is not breathing, administer artificial respiration. Obtain medical assistance.
Skin/Eye contact	Flush eyes immediately and thoroughly with water. Spray with water for at least 15 minutes. Obtain medical assistance.
Ingestion	No first aid should be needed. Not considered a potential route of exposure.

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 extinguishers can be used.

ACCIDENTAL RELEASE MEASURES

Personal precautions	Evacuate all personnel from affected area. Ensure adequate air ventilation. Wear protective clothing and self-contained breathing apparatus. Eliminate source of ignition and respond with trained personnel.
Environmental precautions	Try to stop release.
Clean up methods	Ventilate area.

HANDLING AND STORAGE

Handling and storage	Ensure equipment is adequately earthed. Avoid contact with pure copper, mercury, silver and brass with greater than 70% copper. Suck back of water into container must be prevented. Purge air from system before introducing gas. Container should be stored in dry, well-ventilated areas away from sources of heat and ignition. Storage area should be below 50°C. Contact supplier if in doubt.
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EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limit value (PEL-OSHA)	None
Personal protection	Ensure adequate ventilation. In case of leakage, use self-contained breathing apparatus. Do not smoke while handling product.

PHYSICAL AND CHEMICAL PROPERTIES

Molecular weight	26
Freezing point	-80.8 °C
Boiling point	-84 °C
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
Odour and appearance	Colourless gas. Garlic like odour
Other data	Auto-ignition at 352°C

STABILITY AND REACTIVITY

Stability and reactivity	Can form explosive mixture with air. May decompose violently at high temperature and/or pressure or in the presence of a catalyst.
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TOXICOLOGICAL INFORMATION

General	None
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ECOLOGICAL INFORMATION

General	None.
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DISPOSAL CONSIDERATIONS

General

Do not discharge into areas where there is a risk of forming an explosive mixture with air. Waste gas should be flared through suitable burner with a flash back arrestor. Do not discharge into any place where its accumulation could be dangerous. Contact supplier if guidance is required.

TRANSPORT INFORMATION

Proper shipping name

Acetylene, dissolved

UN Nr

1001

Hazard class

2.1

Shipping label

Label 2: Flammable gas.

Other transport information

Avoid transport on vehicles where load space is not separated from driver's compartment. Ensure vehicle driver is aware of the potential hazards and knows what to do in event of an accident or an emergency. Ensure container is firmly secured and not leaking.

REGULATORY INFORMATION

General

Singapore Factories Act 2000, Sections 14, 34, 44 & 60A

Singapore Standard:

CP 12:2000 part 1, CP 98:2003, SS 152:2003, SS 286:1984 Part 1 to Part 5

Risk and Safety Phrases

R5 – Heating may cause an explosion.

R6 – Explosive with or without contact with air.

R12 – Extremely flammable.

S9 – Keep container in a well ventilated area.

S16 – Keep away from ignition sources. No smoking.

S33 – Take precautionary measures against static discharge.

OTHER INFORMATION

Ensure all national/local regulations are observed.

Details given in this document are believed to be correct at the time of going to press. Whilst proper care has been taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted.

This MSDS is for information purposes only and is subject to change without notice.

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