Acetylene (dissolved)

AL061

Label 2.1 : flammable gas.

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Trade name : Acetylene (dissolved)

MSDS Nr : AL061

Use : INDUSTRIAL, SCIENTIFIC, FUEL

Chemical formula : C2H2

Company identification : Air Liquide Australia Limited
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ALAEnquiries@AirLiquide.com

Emergency phone nr : 1800 812 588

2 HAZARDS IDENTIFICATION

Hazard classification : Classified as Hazardous according to NOHSC criteria. Classified as Dangerous Goods by the criteria of the ADG code.

Hazards identification : Dissolved gas.
Extremely flammable.

R Phrase(s) : R5 : Heating may cause an explosion. - R6 : Explosive with or without contact with air. - R12 : Extremely flammable.

S Phrase(s) : S9 : Keep container in a well-ventilated place. - S16 : Keep away from sources of ignition - No smoking. - S33 : Take precautionary measures against static discharges.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Preparation : Substance.

Substance name		Contents	CAS No	EC No	Annex No	Classification
Acetylene (dissolved)	:	100 %	74-86-2	200-816-9	601-015-00-0	F+; R12 R5 R6

Contains no other components or impurities which will influence the classification of the product.

4 FIRST AID MEASURES

First aid measures

- Inhalation : In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/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.

- Ingestion : Ingestion is not considered a potential route of exposure.

5 FIRE-FIGHTING MEASURES

Specific hazards : Exposure to fire may cause containers to rupture/explode.

Hazardous combustion products : Incomplete combustion may form carbon monoxide.

Extinguishing media

- Suitable extinguishing media : All known extinguishants can be used.

Specific methods : If possible, stop flow of product.
Move away from the container and cool with water from a protected position.
Continue water spray from protected position until container stays cool.
Do not extinguish a leaking gas flame unless absolutely necessary. Spontaneous/ explosive re-ignition may occur. Extinguish any other fire.

Special protective equipment for fire fighters : In confined space use self-contained breathing apparatus.

6 ACCIDENTAL RELEASE MEASURES

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

Environmental precautions : Try to stop release.

Clean up methods : Ventilate area.

7 HANDLING AND STORAGE

Storage : Segregate from oxidant gases and other oxidants in store.
Keep container below 50℃ in a well ventilated place .

Handling : 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.
Purge air from system before introducing gas.
Do not allow backfeed into the container.
Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt.
Keep away from ignition sources (including static discharges).
Refer to supplier's container handling instructions.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

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

9 PHYSICAL AND CHEMICAL PROPERTIES

Physical state at 20 ℃ : Gas.

Colour : Colourless gas.

Odour : Garlic like. Poor warning properties at low concentrations.

Molecular weight : 26

Melting point [℃] : -80.8

Boiling point [℃] : -84 (s)

9 PHYSICAL AND CHEMICAL PROPERTIES (continued)

Critical temperature [℃]	: 35
Vapour pressure [20℃]	: 44 bar
Relative density, gas (air=1)	: 0.9
Relative density, liquid (water=1)	: Not applicable.
Solubility in water [mg/l]	: 1185
Flammability range [vol% in air]	: 2.4 to 83
Auto-ignition temperature [℃]	: 325

10 STABILITY AND REACTIVITY

Hazardous decomposition products : None.

Materials to avoid : Air, Oxidiser.
Can form explosive mixture with air.
Forms explosive acetylides with copper, silver and mercury.
Do not use alloys containing more than 70% copper.
May react violently with oxidants.

Conditions to avoid : Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
May decompose violently at high temperature and/or pressure or in the presence of a catalyst.

Stability : Dissolved in a solvent supported in a porous mass.

11 TOXICOLOGICAL INFORMATION

Acute toxicity : No known toxicological effects from this product.

12 ECOLOGICAL INFORMATION

Ecological effects information : No known ecological damage caused by this product.

13 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 a suitable burner with flash back arrestor.
Do not discharge into any place where its accumulation could be dangerous.
Contact supplier if guidance is required.

Disposal method : Dispose of cylinder via gas supplier only; Cylinder contains a porous material which in some cases contains asbestos.

14 TRANSPORT INFORMATION

UN No. : 1001

• Labelling ADG, IMDG, IATA

: Label 2.1 : flammable gas.

Land transport

H.I. nr : 239

Proper shipping name : ACETYLENE, DISSOLVED

14 TRANSPORT INFORMATION (continued)

HAZCHEM - Emergency Action Code : 2SE
- ADG Class : 2
- ADG Classification code : 4 F
- Packing Instruction(s) - General : P200
Sea transport
- IMO-IMDG code
• Proper shipping name : ACETYLENE, DISSOLVED
• Class : 2.1
- Emergency Schedule (EmS) - Fire : F-D
- Emergency Schedule (EmS) - Spillage : S-U
Air transport
- ICAO/IATA
- Proper shipping name : ACETYLENE, DISSOLVED
• Class : 2.1
• Passenger and Cargo Aircraft : DO NOT LOAD IN PASSENGER AIRCRAFT.
• Cargo Aircraft only : Allowed.
- Packing instruction : 200
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 containers are firmly secured.
- Ensure cylinder valve is closed and not leaking.
- Ensure valve outlet cap nut or plug (where provided) is correctly fitted.
- Ensure valve protection device (where provided) is correctly fitted.
- Ensure there is adequate ventilation.
- Compliance with applicable regulations.

15 REGULATORY INFORMATION

EC Classification : Annex No : 601-015-00-0
F+; R12
R5
R6

EC Labelling
Symbol(s) : F+ : Extremely flammable
R Phrase(s) : R5 : Heating may cause an explosion.
R6 : Explosive with or without contact with air.
R12 : Extremely flammable.
S Phrase(s) : S9 : Keep container in a well-ventilated place.
S16 : Keep away from sources of ignition - No smoking.
S33 : Take precautionary measures against static discharges.

16 OTHER INFORMATION

Ensure all national/local regulations are observed.
Ensure operators understand the flammability hazard.
The hazard of asphyxiation is often overlooked and must be stressed during operator training.

This Safety Data Sheet has been established in accordance with the applicable European Directives and applies to all countries that have translated the Directives in their national laws.

16 OTHER INFORMATION (continued)

DISCLAIMER OF LIABILITY : 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.
Details given in this document are believed to be correct at the time of going to press. 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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