



SAFETY DATA SHEET

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Revised edition no : 1

Date : 15/7/2005

Supersedes : 0/0/0

Acetylene (dissolved)**AL001**

Label 2.1 : flammable gas.



F+ : Extremely flammable

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

Trade name : Acetylene (dissolved)
MSDS No : AL001
Chemical formula : C₂H₂
Company identification : AIR LIQUIDE SA
France
See paragraph 16 "OTHER INFORMATION"
Emergency phone nr : See paragraph 16 "OTHER INFORMATION"

2 COMPOSITION / INFORMATION ON INGREDIENTS

Substance / Preparation : Substance.

Substance name	Contents	CAS No	EC No	Index 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.

3 HAZARDS IDENTIFICATION

Hazards identification : Dissolved gas.
Extremely flammable.

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

- Flammable class** : Extremely flammable.
- 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.



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5 FIRE-FIGHTING MEASURES (continued)

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°C 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 °C : Dissolved gas.
Colour : Colourless gas.
Odo(u)r : Garlic like. Poor warning properties at low concentrations.
Molecular weight : 26
Melting point [°C] : -80.8
Boiling point [°C] : -84 (s)
Critical temperature [°C] : 35
Vapour pressure, 20°C : 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



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9 PHYSICAL AND CHEMICAL PROPERTIES (continued)

Auto-ignition temperature [°C] : 325

10 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.
Forms explosive acetylides with copper, silver and mercury.
Do not use alloys containing more than 70% copper.
Dissolved in a solvent supported in a porous mass.
May react violently with oxidants.

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.

14 TRANSPORT INFORMATION

UN No. : 1001
H.I. nr : 239
ADR/RID
- Proper shipping name : ACETYLENE, DISSOLVED
- ADR Class : 2
- ADR/RID Classification code : 4 F
- Labelling ADR : Label 2.1 : flammable gas.
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.



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15 REGULATORY INFORMATION

EC Classification	: Index 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.

Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out.

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.

Recommended uses and restrictions : This SDS is for information purposes only and is subject to change without notice. [Prior to purchase of products, please contact your local AIR LIQUIDE office for a complete SDS (with Manufacturer's name and emergency phone number).]

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