

MATERIAL SAFETY DATA

SHEET Revised edition no : 1

Date : 31/ 01 / 2010

Supersedes : 0/ 0/ 0

Acetylene (dissolved) EIGA001

F+ : Extremely Label 2.1 : flammable gas. flammable

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

Trade name : Acetylene (dissolved)

MSDS Nr : EIGA001

Use : Fuel. Industrial applications.

Chemical formula : C₂H₂

Company identification : Agas National
PO BOX 1087, Sunnybank Hills, 4109, QLD

Emergency phone number : 07 3103 0667

2 HAZARDS IDENTIFICATION

Hazard classification : Classified as hazardous according to NOHSC criteria.

Classified as a dangerous good 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

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.

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 : In confined space use self-contained breathing apparatus.
fighters

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.

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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.

Odour : 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

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

Labelling ADG : Label 2.1 : flammable gas.

H.I. nr : 239

Proper shipping name : ACETYLENE, DISSOLVED

HAZCHEM - Emergency Action Code : 2SE

: 2 = Fine water spray.

S = Risk of violent reaction or explosion. Recommended personal protective equipment : Full

fire kit and breathing apparatus. Appropriate measures : dilute.

E = There may be a public safety hazard outside the immediate area of the incident, and that

the following actions should be considered :

1. People should be warned to stay indoors with all doors and windows closed, preferably in rooms upstairs and facing away from the incident. Ignition sources should be eliminated and

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14 TRANSPORT INFORMATION (continued)

any ventilation stopped.

2. Effects may spread beyond the immediate vicinity. all non-essential personnel should be

instructed to move at least 250 metres away from the incident.

3. Police and fire brigade incident commanders should consult each other and with a product

expert, or with a source of product expertise.

4. The possible need for subsequent evacuation should be considered, but it should be remembered that in most cases it will be safer to remain in a building than to evacuate.

- **ADG Class** : 2

- **ADG Classification code** : 4 F

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.

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R12 : Extremely flammable.

S Phrase(s) : S9 : Keep container in a well-ventilated place.

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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.

DISCLAIMER OF LIABILITY : 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.

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