

# MATERIAL SAFETY DATA

## SHEET Revised edition no : 1

Date : 31/ 01 / 2012

Supersedes : 0/ 0/ 0

## Acetylene (dissolved) EIGA001

F+ : Extremely Label 2.1 : flammable gas flammabl

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

**Trade name** : Acetylene (dissolved)

**MSDS Nr** : EIGA001

**Use** : Fuel. Industrial applications.

**Chemical formula** : C<sub>2</sub>H<sub>2</sub>

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

**Emergency phone number** : 07 3282 5783

### 2 HAZARDS IDENTIFICATION

**Hazard classificatio** : Classified as hazardous according to NOHSC criteria.

Classified as a dangerous good by the criteria of the ADG code.

**Hazards identificatio** : 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 Classificatio**

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 produc

### 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 i  
breathing stopped.

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

### 5 FIRE-FIGHTING MEASURES

**Flammable class** : Extremely flammable

**Specific hazard** : 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 method** : 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 fir** : In confined  
space use self-contained breathing apparatus.

#### fighter

### 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

### Agas National

PO BOX 1087, Sunnybank Hills, 4109, QLDPage : 2

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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 cod** : 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 Classificatio** : Annex No : 601-015-00-0

F+; R12

R5

R6

#### EC Labelling

**Symbol(s)** : F+ : Extremely flammabl

**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.

**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.

**End of document**

**Agas National**

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