

## Material Safety Data Sheet – Acetylene (dissolved)

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

MSDS NR : 001  
 PRODUCT NAME : Acetylene (dissolved)  
 COMPANY IDENTIFICATION : See heading and/or footer  
 EMERGENCY PHONE NUMBER : 603-20 78 9200

### 2. COMPOSITION / INFORMATION ON INGREDIENTS

SUBSTANCE / PREPARATION : Substance  
 COMPONENTS / IMPURITIES : Contains on other components or impurities which will influence the Classification of the product.

CAS NR : 07782-86-2  
 EEC NR. (FROM EINECS) : 2008169

### 3. PHYSICAL AND CHEMICAL PROPERTIES

MOLECULAR WEIGHT : 26  
 MELTING POINT : 80.8 °C  
 BOILING POINT : 84(s) °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  
 APPEARANCE / COLOUR : Colorless gas  
 ODOUR : Garlic like. Poor warning properties at low concentrations.  
 AUTOIGNITION TEMPERATURE : 325 °C  
 FLAMMABILITY RANGE : 2.4-88 vol. % in air

### 4. FIRST AID MEASURES

#### INHALATION

In high concentrations may cause asphyxiation. Symptoms may included 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 victims to uncontaminated area wearing self-contained breathing apparatus. Keep victims 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 MEASURE

SPECIFIC HAZARDS : Exposure to fire may cause containers to rupture/explode.  
 Flammable.  
 HAZARDOUS COMBUSTION PRODUCTS : Incomplete combustion may from carbon monoxide.  
 SUITABLE EXTINGUISHING MEDIA : All know extinguishants can be used  
 SPECIFIC METHODS : If possible, stop flow of product. Continue water spry from protected position until container stays cool. Move container away or cool with water from a protected position. 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 : Evacuate area. Ensure adequate air ventilation. Eliminate ignition sources.  
 ENVIRONMENTAL PRECAUTIONS : Try to stop release.  
 CLEAN UP METHODS : Ventilate area.

### 7. 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 the container must be prevented. 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 discharge).

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Segregate from oxidant gases and other oxidants in store. Refer to supplier's container handling instructions. Keep container below 50 °C in a well-ventilated place.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

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

**9. HAZARDS IDENTIFICATION**

HAZARDS IDENTIFICATION : Dissolved gas. Extremely flammable

**10. STABILITY AND REACTIVITY**

Can form explosive mixture with air. May decompose violently at high temperature and/or in the presence of a catalyst. Forms explosive acetylides with copper, silver and mercury. Violently oxidises an organic material. 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**

GENERAL : No known toxicological effects from this product

**12. ECOLOGICAL INFORMATION**

GENERAL : No known ecological damages 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 flashback arrestor. Do not discharge into any place where accumulation could be dangerous. Contact supplier if guidance is required.

**14. TRANSPORT INFORMATION**

UN NR. : 1001  
 CLASS / DIV. : 2.1  
 ADR / RID ITEM NR. : 2.9c  
 TREMCARD NR. : 813  
 GROUPCARD NR. : 20g25  
 LABELING ADR : Label 3: flammable gas.  
 OTHER TRANSPORT INFORMATION :

Avoid transport on vehicles where load space is not separated from the driver's compartment. Ensure vehicles 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 they are firmly secured and:

- cylinder valve is closed and not leaking
- valve outlet cap nut or plug (where provided) is correctly fitted
- valve protection device (where provided) is correctly fitted
- adequate ventilation
- compliance with applicable regulations

**15. REGULATORY INFORMATION**

NUMBER IN ANNEX 1 OF DIR 67 / 548 : 601-015-00-0  
 EC CLASSIFICATION : R5/R6/F;R 12  
 SYMBOLS : F+: Extremely flammable  
 R PHRASE : 5/6/12  
 S PHRASES : 9-16-33  
 LABELING OF CYLINDERS : SYMBOLS  
 Road transport symbols are used and selected according to the most stringent product classification -EC or ADR.  
 Label 3: flammable gas.  
 RISK PHRASES : R 12 Extremely flammable  
 SAFETY PHRASES : S9/16/33A Keep container in well-ventilated place, away from ignition sources, including static discharge.

**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. 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.