

MATERIAL SAFETY DATA SHEET

PRODUCT: DISSOLVED ACETYLENE

1. PRODUCT IDENTIFICATION AND COMPANY DETAILS

Product: Dissolved acetylene
Chemical formula: C₂H₂
Company name: Prime Co. (Middle East) Ltd.
Company contact: +971-4-8816820

2. COMPOSITION / INFORMATION ON INGREDIENTS

Substance / Preparation: Substance
Components / Impurities: Contains no other components or impurities which will influence the classification of product.
CAS Number: 74-86-2

3. HAZARDS IDENTIFICATION

Hazards identification: Highly flammable.

4. FIRST AID MEASURES

Inhalation: Immediately remove to fresh air. Call doctor.
Ingestion: If swallowed, immediately give water and induce vomiting if victim is conscious. Call doctor.
Eye contact: Flush eyes thoroughly with water.

5. PHYSICAL & CHEMICAL PROPERTIES

Appearance: Colourless gas
Odour: Commercial acetylene has garlic like odour
Physical state: Gas at normal temperature and pressure
Melting point: - 82.2 °C
Boiling point: - 75.2 °C
Vapour density: 1.1716 kg/m³ at 21.1 °C and 1 atm
Vapour pressure: 4479 kPa (649.6 psi) at 21 °C
Solubility in water: 1185 mg/l
Flammability: Flammable
Flammable limits: **Lower:** 2.5% **Upper:** 100%
Autoignition
Temperature: 305 °C at 1 atm
Molecular weight: 26.04
Molecular formula: C₂H₂

6. FIRE FIGHTING MEASURES

Flammable Properties: Highly flammable gas.

Suitable extinguishing media: All known extinguishants can be used.

Products of combustion: Carbon monoxide and carbon dioxide.

Specific methods: If possible, stop flow of product. Heat of fire can build pressure in cylinder, hence move away from cylinder.

Special protective equipment for firefighting: Use self contained breathing apparatus.

7. STABILITY AND REACTIVITY

Chemical stability: Can form explosive mixture with air.

In compatible materials: Copper, silver, mercury or their alloys, Oxidising agents, acids, moisture.

8. TOXICOLOGICAL INFORMATION

No known effects from acetylene gas.

9. ECOLOGICAL INFORMATION

Ecotoxicity: No known effects

10. DISPOSAL PROCEDURES

Do not attempt to dispose of residual or unused quantities. Return cylinder to supplier.

11. ACCIDENTAL RELEASE MEASURES

Personal precautions: Shut off valve if without risk. Move cylinder to well ventilated area. Oxygen must never be allowed to come in contact with any oily surface, greasy clothes or other combustible material.

Environmental precautions: Avoid waste from contaminating the surrounding environment.

12. HANDLING AND STORAGE

Personal precautions to be taken: Forms explosive mixture with air. Immediately evacuate all personnel from area. Remove all sources of ignition if without risk. Close cylinder valve after each use and keep closed even when cylinder is empty. Never apply heat or flame to any part of cylinder.

Precautions to be taken in storage: Store and use with adequate ventilation away from oil, grease and other hydrocarbons. Firmly secure cylinders upright to keep them from falling or being knocked over. Store cylinders below 50 °C.

13. TRANSPORT INFORMATION

UN Number: 1001
Hazard Class: 2.1
Labeling ADR Symbols Label: Flammable gas

Other information: Avoid transport on vehicles where the load space is not separated from driver's compartment. The vehicle driver must be aware of the potential hazards of the cylinders and knows what to do in the event of an accident or emergency. Before transporting cylinders ensure that they are firmly secured in the vehicle, cylinder valve is closed, valve protection is in place, adequate ventilation and compliance with local regulations.

14. REGULATORY INFORMATION

Labeling of cylinder

- Label 2.1: Flammable gas
- Label 05: fire intensifying risk
- R5 Heating may cause explosion
- R6 Explosive with or without contact with air
- R12 Extremely flammable
- S9 Keep cylinders in well ventilated place
- S16 Keep away from ignition sources – No smoking

15. OTHER INFORMATION

Ensure all national / local regulations are observed and adhered to. Ensure that the operators understand the hazard of oxygen enrichment. Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out.

The MSDS is based on reliable sources. Sufficient care has been taken in preparation of this document, however no liability for injury or damage resulting from its use can be accepted.

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