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## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

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### 1.1 Product Identifier

**Product Name:** ACETYLENE, DISSOLVED

**Synonyms:** Ethyne, Dissolved Acetylene

**Product Codes:** A5000

### 1.2 Relevant Identified Uses and Uses Advised Against

**Identified Uses:** Fuel gas for oxy-acetylene welding, cutting, heating

**Uses Advised Against:** Not for medical use or food-grade applications

### 1.3 Supplier Details

**Supplier:** Industrial Gases New Zealand Ltd t/a Ezispap Gas

**Address:** 6 and 10 Canaveral Drive, Rosedale, Auckland, NEW ZEALAND

**Phone:** +64 9 444 0357

**Email:** sales@eziswapgas.co.nz

**Website:** <http://www.eziswapgas.co.nz>

### 1.4 Emergency Telephone Number

**Emergency Telephone (NZ Only):** 111

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## 2. HAZARDS IDENTIFICATION

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### 2.1 Classification of the Substance or Mixture

- Flammable gases – Category 1A
- Gases under pressure – Dissolved gas
- Acute toxicity (inhalation) – Category 4

### 2.2 GHS Label Elements

**Signal Word:**

**DANGER**

**Pictogram:**



### **Hazard Statements**

- H220: Extremely flammable gas
- H280: Contains gas under pressure; may explode if heated
- H332: Harmful if inhaled

### **Precautionary Statements**

- P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking
- P377: Leaking gas fire: Do not extinguish unless leak can be stopped safely
- P381: Eliminate all ignition sources if safe to do so
- P403: Store in a well-ventilated place

**2.3 Other Hazards**

- Acetylene forms explosive mixtures with air
- Can decompose explosively under pressure if heated
- May act as an asphyxiant at high concentrations

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**3. COMPOSITION/ INFORMATION ON INGREDIENTS**

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<b>Ingredient</b>	<b>CAS Number</b>	<b>EC Number</b>	<b>Content (v/v)</b>
Acetylene	74-86-2	200-816-9	≥98%

Dissolved in solvent (acetone) in a porous mass for safe handling.

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**4. FIRST AID MEASURES**

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**4.1 Description of First Aid Measures**

- **Inhalation:** Remove victim to fresh air. If breathing is difficult, give oxygen. Seek immediate medical attention.
- **Skin Contact:** Not irritating. If contact with cold gas occurs, warm slowly with water.
- **Eye Contact:** Rinse with lukewarm water. Seek medical attention for irritation or exposure to high pressure.
- **Ingestion:** Not applicable (gas)

**4.2 Most Important Symptoms and Effects**

- Central nervous system depression: dizziness, drowsiness, headache
- High concentrations may cause unconsciousness or asphyxiation

**4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed**

- Treat symptomatically for CNS effects and asphyxia
- Ensure responders have appropriate SCBA

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**5. FIRE FIGHTING MEASURES**

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**5.1 Extinguishing Media**

- DO NOT extinguish a leaking gas flame unless leak can be stopped
- Use dry chemical or CO<sub>2</sub> on surrounding fire
- Water spray to cool cylinders

**5.2 Special Hazards Arising from the Substance**

- Extremely flammable
- Explosion risk in enclosed or heated environments
- Cylinders may rupture violently if heated

**5.3 Advice for Firefighters**

- Use full protective equipment and SCBA
- Evacuate area
- Stop leak if safe to do so
- Keep cylinders cool with water spray

**5.4 Hazchem Code**

2SE

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## 6. ACCIDENTAL RELEASE MEASURES

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### 6.1 Personal Precautions, Protective Equipment and Emergency Procedures

- Evacuate area immediately
- Eliminate all ignition sources
- Ensure ventilation
- Use SCBA in confined or poorly ventilated spaces

### 6.2 Environmental Precautions

- Avoid release into enclosed or low-lying areas

### 6.3 Methods and Materials for Containment and Clean-Up

- Vent gas in a safe area
- Do not re-enter until safe atmosphere confirmed

### 6.4 Reference to Other Sections

See Sections 8 and 13

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## 7. HANDLING AND STORAGE

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### 7.1 Precautions for Safe Handling

- Use only with flame arrestors
- Avoid heat, sparks, and flame
- Open valves slowly and use proper regulators
- Do not use oil or grease on equipment

### 7.2 Conditions for Safe Storage, Including Any Incompatibilities

- Store upright in well-ventilated, cool, dry area
- Keep away from oxidising agents
- Do not store near exits or emergency equipment

### 7.3 Specific End Use(s)

Industrial cutting, welding, and heating applications

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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### 8.1 Control Parameters (Workplace Exposure Standards - NZ WES 2022)

- Acetylene: TWA 250 ppm (266 mg/m<sup>3</sup>)

### 8.2 Exposure Controls

- **Engineering Controls:** Explosion-proof ventilation systems
- **Personal Protective Equipment (PPE):**
  - **Eye Protection:** Chemical safety goggles or face shield
  - **Skin Protection:** Protective gloves for mechanical protection
  - **Respiratory Protection:** SCBA for leaks, confined spaces, or poor ventilation



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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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Property	Value
Appearance	Colourless gas
Odour	Distinct, garlic-like
Boiling Point	-84°C
Flash Point	-17.8°C
Vapour Density (Air=1)	0.91
Flammability Limits	2.5% – 100% in air
Solubility in Water	Slight
Critical Temperature	35.2°C
Autoignition Temp	305°C
Molecular Weight	26.04

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## 10. STABILITY AND REACTIVITY

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### **10.1 Reactivity**

Highly reactive flammable gas

### **10.2 Chemical Stability**

Unstable under high pressure or temperature

### **10.3 Possibility of Hazardous Reactions**

Explosive decomposition possible if heated or pressurised

### **10.4 Conditions to Avoid**

Heat, sparks, static discharge, incompatible materials

### **10.5 Incompatible Materials**

Oxidising agents, copper (above 70% content), silver, mercury

### **10.6 Hazardous Decomposition Products**

Carbon monoxide and carbon dioxide under combustion

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## 11. TOXICOLOGICAL INFORMATION

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- **Acute Toxicity:** Harmful if inhaled
- **Inhalation:** CNS depression, headache, dizziness, nausea
- **Skin/Eye:** Contact with liquefied gas may cause frostbite
- **Chronic Effects:** No known long-term effects

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## 12. ECOLOGICAL INFORMATION

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- **Ecotoxicity:** Not expected to harm aquatic life
- **Persistence and Degradability:** Degrades in air
- **Bioaccumulation:** None
- **Mobility:** High
- **Other Adverse Effects:** Displaces oxygen

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## 13. DISPOSAL CONSIDERATIONS

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- **Product:** Release into well-ventilated area
- **Container:** Return to supplier; do not puncture or incinerate

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## 14. TRANSPORT INFORMATION

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Mode	UN Number	Proper Shipping Name	Class	Packing Group	Hazchem	EMS
Land	UN1001	Acetylene, Dissolved	2.1	Not applicable	2SE	—
Sea (IMDG)	UN1001	Acetylene, Dissolved	2.1	Not applicable	2SE	F-D, S-U
Air (IATA)	UN1001	Acetylene, Dissolved	2.1	Not applicable	—	—

### Additional Notes:

- Classified as a Dangerous Good under NZS 5433, IMDG, and IATA
- Hazard Labels:



- Cylinders must be secured upright and transported with valves closed and protected

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## 15. REGULATORY INFORMATION

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- **HSNO Approval Code:** HSR001009
- **Group Standard:** Flammable Gases Group Standard 2017
- **Inventory Status:** Listed on NZIoC (New Zealand Inventory of Chemicals)

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## 16. OTHER INFORMATION

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- This SDS has been prepared in accordance with the Health and Safety at Work (Hazardous Substances) Regulations 2017 and GHS 7
- Ensure proper fire and gas safety training for users
- Inspect cylinders regularly for damage or leaks
- Revision Date: June 2025