

## **1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER**

### **1.1 Product identifier**

**Product name** ACETYLENE (DISSOLVED)  
**Synonyms** 200 - SDS NUMBER • MOREGAS ACETYLENE (DISSOLVED) • INSTRUMENT ACETYLENE

### **1.2 Uses and uses advised against**

**Uses** FUEL GAS • INDUSTRIAL APPLICATIONS

### **1.3 Details of the supplier of the product**

**Supplier name** MOREGAS PTY LTD  
**Address** Level 2, Gasworks Plaza,  
76 Skyring Terrace,  
Newstead, QLD, 4006, AUSTRALIA  
**Telephone** 08 9455 5999  
**Email** info@moregas.net.au

### **1.4 Emergency telephone numbers**

**Emergency** 13 11 26 - Poisons Information Centre (24/7) (Australia only)

## **2. HAZARDS IDENTIFICATION**

### **2.1 Classification of the substance or mixture**

CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

#### **Physical Hazards**

Flammable Gases: Category 1  
Gases Under Pressure: Dissolved gas  
Explosive with or without contact with air

#### **Health Hazards**

Not classified as a Health Hazard

#### **Environmental Hazards**

Not classified as an Environmental Hazard

### **2.2 GHS Label elements**

**Signal word** DANGER

**Pictograms**



#### **Hazard statements**

AUH006 Explosive with or without contact with air  
H220 Extremely flammable gas.  
H280 Contains gas under pressure; may explode if heated.

#### **Prevention statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

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**Response statements**

P377 Leaking gas fire: Do not extinguish, unless leak can be stopped safely.  
P381 Eliminate all ignition sources if safe to do so.

**Storage statements**

P410 + P403 Protect from sunlight. Store in a well-ventilated place.

**Disposal statements**

None allocated.

**2.3 Other hazards**

Asphyxiant. Effects are proportional to oxygen displacement.

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**3. COMPOSITION/ INFORMATION ON INGREDIENTS**

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**3.1 Substances / Mixtures**

Ingredient	CAS Number	EC Number	Content
ACETYLENE	74-86-2	200-816-9	100%

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**4. FIRST AID MEASURES**

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**4.1 Description of first aid measures**

**Eye** Adverse effects not expected from this product.  
**Inhalation** If inhaled, remove from contaminated area. To protect rescuer, use an Air-line respirator or Self Contained Breathing Apparatus (SCBA). Be aware of possible explosive atmospheres. Apply artificial respiration if not breathing. Give oxygen if available. For advice, contact a Poisons Information Centre on 13 11 26 (Australia Wide) or a doctor.  
**Skin** Adverse effects not expected from this product.  
**Ingestion** Due to product form and application, ingestion is considered unlikely.  
**First aid facilities** Eye wash facilities and safety shower should be available.

**4.2 Most important symptoms and effects, both acute and delayed**

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.

**4.3 Immediate medical attention and special treatment needed**

Treat for asphyxia.

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**5. FIRE FIGHTING MEASURES**

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**5.1 Extinguishing media**

Stop flow of gas if safe to do so, such as by slowly closing the cylinder valve. If the gas source cannot be isolated, do not extinguish the flame, since re-ignition and explosion could occur. Await arrival of emergency services or manufacturer's advisor. Drench and cool cylinders with water spray from protected area at a safe distance. If it is absolutely necessary to extinguish the flame, use only a dry chemical powder extinguisher. Do not move cylinders for at least 24 hours. Avoid shock and bumps to cylinders.

**5.2 Special hazards arising from the substance or mixture**

Extremely flammable. Eliminate all ignition sources including cigarettes, open flames, spark producing switches/tools, heaters, naked lights, pilot lights, mobile phones etc. when handling.

**5.3 Advice for firefighters**

Temperatures in a fire may cause cylinders to rupture and internal pressure relief devices to be activated. Cool cylinders or containers exposed to fire by applying water from a protected location. Do not approach cylinders or containers suspected of being hot. This material is capable of forming explosive mixtures in air.

**5.4 Hazchem code**

2SE  
2 Fine Water Spray.  
S Risk of violent reaction or explosion. Wear full fire kit and breathing apparatus. Dilute spill and run-off.  
E Evacuation of people in and around the immediate vicinity of the incident should be considered.

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

If the cylinder is leaking, evacuate area of personnel. Inform manufacturer/supplier of leak. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. Ensure adequate air ventilation. Eliminate all sources of ignition. Consider the risk of potentially explosive atmospheres.

### 6.2 Environmental precautions

Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.

### 6.3 Methods of cleaning up

Carefully move material to a well ventilated remote area, then allow to discharge if safe to do so. Do not attempt to repair leaking valve or cylinder safety devices.

### 6.4 Reference to other sections

See Sections 8 and 13 for exposure controls and disposal.

## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Use of safe work practices are recommended to avoid inhalation. Do not drag, drop, slide or roll cylinders. The uncontrolled release of a gas under pressure may cause physical harm. Use a suitable hand truck for cylinder movement.

### 7.2 Conditions for safe storage, including any incompatibilities

Do not store near incompatible substances and sources of ignition. Cylinders should be stored: upright, prevented from falling, in a secure area; below 45°C, in a dry, well ventilated area constructed of non-combustible material with firm level floor (preferably concrete), away from areas of heavy traffic and emergency exits. Post "No Smoking or Open Flames" signs in the storage areas. Refer to applicable legislation on flammable storage quantity restrictions. Never transfer acetylene to another cylinder or other container.

### 7.3 Specific end uses

No information provided.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 Control parameters

#### Exposure standards

Ingredient	Reference	TWA		STEL	
		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Acetylene	SWA [AUS]	Asphyxiant			

### Biological limits

No biological limit values have been entered for this product.

### 8.2 Exposure controls

#### Engineering controls

Provide suitable ventilation to minimise or eliminate exposure. Confined areas (e.g. tanks) should be adequately ventilated or gas tested. Flammable/explosive vapours may accumulate in poorly ventilated areas.

#### PPE

<b>Eye / Face</b>	Wear safety glasses.
<b>Hands</b>	Wear leather or cotton gloves.
<b>Body</b>	Wear coveralls and safety boots.
<b>Respiratory</b>	If using product in a confined area, wear an Air-line respirator.



## **9. PHYSICAL AND CHEMICAL PROPERTIES**

### **9.1 Information on basic physical and chemical properties**

Appearance	COLOURLESS GAS
Odour	ODOURLESS
Flammability	EXTREMELY FLAMMABLE
Flash point	< 23°C
Boiling point	-84°C
Melting point	NOT AVAILABLE
Evaporation rate	NOT AVAILABLE
pH	NOT AVAILABLE
Vapour density	0.91 (Air = 1)
Specific gravity	NOT AVAILABLE
Solubility (water)	SOLUBLE
Vapour pressure	NOT AVAILABLE
Upper explosion limit	80 % to 85 %
Lower explosion limit	2.5 %
Partition coefficient	NOT AVAILABLE
Autoignition temperature	300°C
Decomposition temperature	NOT AVAILABLE
Viscosity	NOT AVAILABLE
Explosive properties	NOT AVAILABLE
Oxidising properties	NOT AVAILABLE
Odour threshold	NOT AVAILABLE

### **9.2 Other information**

% Volatiles	100 %
Critical temperature	35.2°C

## **10. STABILITY AND REACTIVITY**

### **10.1 Reactivity**

Forms explosive acetylides with copper, silver and mercury. Do not use alloys containing more than 65% copper.

### **10.2 Chemical stability**

Stable under recommended conditions of storage. However, sensitive to heat or shock and may become explosive.

### **10.3 Possibility of hazardous reactions**

Polymerises with evolution of heat. Avoid contact with curing agents, accelerators, and/or initiators.

### **10.4 Conditions to avoid**

Avoid shock, friction, heavy impact, heat, sparks, open flames and other ignition sources.

### **10.5 Incompatible materials**

Incompatible with oxidising agents (e.g. hypochlorites), copper, copper alloys (>70% copper), silver and mercury to form explosive acetylides. May decompose violently at high temperatures and/or pressures or in the presence of a catalyst.

### **10.6 Hazardous decomposition products**

May evolve toxic gases if heated to decomposition.

## **11. TOXICOLOGICAL INFORMATION**

### **11.1 Information on toxicological effects**

Acute toxicity	Based on available data, the classification criteria are not met.
Skin	Not classified as a skin irritant.
Eye	Not classified as an eye irritant.
Sensitisation	Not classified as causing skin or respiratory sensitisation.
Mutagenicity	Not classified as a mutagen.
Carcinogenicity	Not classified as a carcinogen.
Reproductive	Not classified as a reproductive toxin.
STOT - single exposure	Asphyxiant. Effects are proportional to oxygen displacement. Over exposure may result in dizziness, drowsiness, weakness, fatigue, breathing difficulties and unconsciousness.

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**STOT - repeated exposure** Not classified as causing organ damage from repeated exposure.  
**Aspiration** Not classified as causing aspiration.

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**12. ECOLOGICAL INFORMATION**

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**12.1 Toxicity**

No ecological damage is expected to be caused by this product.

**12.2 Persistence and degradability**

No information provided.

**12.3 Bioaccumulative potential**

This product is not expected to bioaccumulate.

**12.4 Mobility in soil**

Because of its high volatility, the product is unlikely to cause ground or water pollution.

**12.5 Other adverse effects**

No known effects from this product.

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**13. DISPOSAL CONSIDERATIONS**

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**13.1 Waste treatment methods**

**Waste disposal** Cylinders should be returned to the manufacturer or supplier for disposal of contents.  
**Legislation** Dispose of in accordance with relevant local legislation.

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**14. TRANSPORT INFORMATION**

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CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE



	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
14.1 UN Number	1001	1001	1001
14.2 Proper Shipping Name	ACETYLENE, DISSOLVED	ACETYLENE, DISSOLVED	ACETYLENE, DISSOLVED
14.3 Transport hazard class	2.1	2.1	2.1
14.4 Packing Group	None allocated.	None allocated.	None allocated.

**14.5 Environmental hazards**

No information provided.

**14.6 Special precautions for user**

**Hazchem code** 2SE  
**GTEPG** 2A1

**Other information** Refer to Commonwealth, State and Territory Dangerous Goods Legislation which contain requirements which affect gas storage and transport. Special transport precautions: 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 there is adequate ventilation.  
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.

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Ensure valve protection device (where provided) is correctly fitted.

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**15. REGULATORY INFORMATION**

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**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

<b>Poison schedule</b>	A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).
<b>Classifications</b>	Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals.
<b>Inventory listings</b>	<b>AUSTRALIA: AICS (Australian Inventory of Chemical Substances)</b> All components are listed on AICS, or are exempt.

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**16. OTHER INFORMATION**

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**Additional information** The storage of significant quantities of gas cylinders must comply with AS4332 The storage and handling of gases in cylinders.

Application method: Never open an acetylene cylinder valve without the regulator attached. Gas regulator of suitable pressure and flow rating fitted to cylinder and manifold with low pressure gas distribution equipment which controls fuel gas mixture and flame. The regulator and other equipment must be compatible with the product and suited for the particular use. Never "sniff" acetylene as it may ignite spontaneously. Instead, carefully inspect the outlet and if there are any signs of dirt, blow it out with a jet of clean compressed air or nitrogen.

**PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:**

The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as form of product, method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

**HEALTH EFFECTS FROM EXPOSURE:**

It should be noted that the effects from exposure to this product will depend on several factors including: form of product; frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

**Abbreviations**

ACGIH	American Conference of Governmental Industrial Hygienists
CAS #	Chemical Abstract Service number - used to uniquely identify chemical compounds
CNS	Central Nervous System
EC No.	EC No - European Community Number
EMS	Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)
GHS	Globally Harmonized System
GTEPG	Group Text Emergency Procedure Guide
IARC	International Agency for Research on Cancer
LC50	Lethal Concentration, 50% / Median Lethal Concentration
LD50	Lethal Dose, 50% / Median Lethal Dose
mg/m <sup>3</sup>	Milligrams per Cubic Metre
OEL	Occupational Exposure Limit
pH	relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
ppm	Parts Per Million
STEL	Short-Term Exposure Limit
STOT-RE	Specific target organ toxicity (repeated exposure)
STOT-SE	Specific target organ toxicity (single exposure)
SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
SWA	Safe Work Australia
TLV	Threshold Limit Value
TWA	Time Weighted Average

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**Report status**

This document is based on information concerning the product and is believed to represent the safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer, importer or supplier.

While MoreGas has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, MoreGas accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS.

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