



Material Safety Data Sheet

Acetylene, Dissolved

1. MATERIAL IDENTIFICATION AND SUPPLIER

Supplier name: Supagas 2009 limited
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Emergency: 111
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Web Site <http://www.supagas.co.nz>
Use(s) Fuel, Industrial Applications
Synonym(s) ACETYLENE, COMPRESSED
MSDS Date 23 June 2010

2. HAZARDS IDENTIFICATION

CLASSIFIED AS HAZARDOUS ACCORDING TO HS (MIN DEG OF HAZ) REGS 2001

HAZARD CLASSIFICATION:

2.1.1A Flammable gases: High Hazard.

HAZARD STATEMENT:

Extremely flammable gas. Explosive; fire blast or projection hazard.

PREVENTION STATEMENT:

Read label carefully before use
Keep away from heat/sparks/open flame/hot surfaces. No Smoking

CLASSIFIED AS A DANGEROUS GOOD ACCORDING TO NZS 5433
UN No. 1001

Pkg Group: None Allocated

DG Class: 2.1

Hazchem Code: 2[S]E

Hazard Risk(s): Ruptured cylinders may rocket.

3. COMPOSITION

Ingredients	Einics	CAS no.	Content
Acetylene	Not Available	74-86-2	100%

4. FIRST AID MEASURES

Eye	No Irritation to the eye.
Skin	Treatment for thermal burns by immersing affected area in tepid water and lightly bandaging with sterile dressing.
Inhalation	Acetylene is narcotic. Low concentrations of acetylene cause symptoms similar to those of being intoxicated. By diluting the concentration of oxygen in the surrounding air acetylene becomes an asphyxiant. Never enter an area suspected of being influenced by an asphyxiant without wearing the approved breathing apparatus to ensure you don't become a victim. Seek immediate urgent medical attention for victims of asphyxiation.
Ingestion	Ingestion is considered unlikely. However, should ingestion occur, contact a Poison Information Centre on 0800764 766 (0800 POISON) or +643 479 7248 (New Zealand) or a doctor.
Advice to Doctor	Treat symptomatically and inform doctor that victim has been exposed to an oxygen deficient atmosphere.

5. FIRE FIGHTING MEASURES

Fire and Explosion

Highly flammable gas. Temperatures in a fire may cause cylinders to rupture and internal pressure relief devices to be activated. Call fire brigade. This product will aid the fire. This product will vigorously support combustion. Do not approach cylinders suspected to be hot. Ensure working area is well ventilated before re-use. Notify the manufacturer that you will be returning a faulty cylinder.

Extinguishing

Stop flow of gas if safe to do so. If the gas source cannot be isolated, do not distinguish the flame as re-ignition and explosion could occur. Await arrival of emergency services or manufacturer's representative. 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 for extinguishing. Do not move cylinders for at least 24 hours.

Flammability

Highly flammable- Product will add fuel to the fire. Heating to decomposition will produce acrid smoke and irritating fumes. Eliminate all ignition sources when handling. Spontaneously flammable in air.

Hazchem Code 2[S]E

6. ACCIDENTAL RELEASE MEASURES

Spillage GAS CYLINDERS: If the cylinder is leaking, eliminate all potential ignition sources and evacuate area of personnel. Inform manufacturer/supplier of leak. Wear appropriate PPE and if safe to do so carefully move it to a well ventilated remote area, then allow to discharge. Do not attempt to repair leaking valve or cylinder safety devices.

Personal protection: Do not smoke while handling this product. Persons moving cylinders should be provided with safety footwear, safety glasses and leather or PVC gloves. Full cover overalls are recommended. All personal protective equipment must be free from oil and grease.

7. STORAGE AND HANDLING

Handling

Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

Storage

Do not store near sources of ignition or incompatible materials, there should be a minimum distance of 5 metres away from ignition sources. Cylinders should be stored below 45 C in a secure area, upright and restrained to prevent cylinders from falling. Cylinders should also be stored 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. There should be signs posted clearly disallowing smoking or open flames. Approved handlers are required for more than 100m³ stored on site.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Standards	Acetylene is a simple Asphyxiant.
Biological Limit Values	No biological limit allocated.
Engineering Controls	Always use a flashback arrestor on both the torch and cylinder ends of the hose. Provide ventilation to the area of use to prevent accumulation of acetylene at flammable concentrations. Never use acetylene in direct contact with unalloyed copper, silver and mercury as it will form explosive acetylide compounds.
Personal Protection Equipment	Wear safety boots, leather gloves and safety glasses and approved breathing apparatus. Clothing should be of 100% cotton or fire resistant to prevent static electricity which could cause an ignition and also melt onto the skin.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Colourless gas	Solubility (Water) : 1.72 m ³ /kg @ 0°C
Odour: Garlic like odour	Specific gravity: Not Available
PH: Not Available	% Volatiles : Not Available
Vapour pressure: 4700 kPa @ 25°C	Flammability: (in Air) 2.2% - 85%
Vapour Density: 0.906 (Air =1)	Flash point: <23°C
Boiling point: -84°C	Upper explosion limit: 80 – 85 %
Melting point: not available	Lower explosion limit: 2.2%
Evaporation rate; not available	Autoignition Temperature: 305°C
Critical Temperature: 35.2°C	Density: 1.113 kg/m ³
Critical pressure: 6242	Cylinder pressure when full:

kPa

10. STABILITY AND REACTIVITY

Material to Avoid

Acetylene is non corrosive. It is satisfactory for use with all commonly used metals with the exception of Copper, Silver & Mercury. The use of brasses containing more than 66% copper, Brazing materials containing copper or Silver and mercury manometers should be avoided. Hazardous by products may be produced when this gas is used in welding, cutting and associated processes.

Flammability

Extremely Flammable gas

11. TOXICOLOGICAL INFORMATION

Health Hazard

Summary

Asphyxiant, Symptoms of exposure are directly linked to the displacement of oxygen. As the amount of oxygen inhaled is reduced, the pulse rate will accelerate and the rate of breathing will increase as a result. The ability to maintain attention will diminish, muscular coordination is disturbed. As oxygen levels deplete below 10% judgement becomes faulty and severe injuries may occur as a result of indecisiveness. Exceeding 6% will leave permanent brain damage, loss of consciousness and then death.

Eye

Non irritating.

Inhalation

Asphyxiant, effects are proportional to oxygen displacement.

Skin

Non irritating.

Ingestion

Due to product form, ingestion is considered highly unlikely.

Toxicity Data

No LD50 data available for this product.

12. ECOLOGICAL INFORMATION

Environment

No Known ecological damage caused by this product.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Cylinders should be returned to the manufacturer or supplier for disposal of contents.

Legislation Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

Transport

Ensure cylinder is separated from driver and that outlet of relief device is not obstructed.



CLASSIFIED AS A DANGEROUS GOOD ACCORDING TO NZS 5433

Shipping Name : Acetylene , Dissolved

UN No. 1001	DG Class: 2.1	Subsidiary Risk(s): None allocated
Pkg Group: None Allocated	Hazchem Code: 2[S]E	
15. REGULATORY INFORMATION		

Group Name Acetylene Dissolved

Approved handlers are required if more than 100m³ is stored on site.

The "HASNO" act 1996 and hazardous substances (compressed gases) regulations 2004.

16. OTHER INFORMATION

APPLICATION METHOD: Gas regulator of suitable pressure and flow rating fitted to cylinder or manifold with low pressure gas distribution to equipment.

ABBREVIATIONS:

mg/m³ - Milligrams per cubic metre

ppm - Parts Per Million

TWA/ES - Time Weighted Average or Exposure Standard.

CNS - Central Nervous System

NOS - Not Otherwise Specified

pH - relates to hydrogen ion concentration - this value will relate to a scale of 0 - 14, where 0 is highly acidic and 14 is highly alkaline.

CAS# - Chemical Abstract Service number - used to uniquely identify chemical compounds.

M - moles per litre, a unit of concentration.

IARC - International Agency for Research on Cancer.

HSNO –Hazardous substances and new organisms act 1996.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:

The recommendation for protective equipment contained within this report is provided as a guide only.

Factors such as 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: 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.

This MSDS summarises to our best knowledge, at the date of issue, the health and safety hazard information regarding this product and general guidance on how to safely handle the product in the workplace. All due care has been taken to include accurate and up-to-date information in this MSDS.

Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact Supagas 2009 Ltd. As far as lawfully possible, 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 MSDS can be accepted. Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is available on request. This MSDS has been prepared in accordance with NZCIC Code of Practice - Preparation of Safety Data Sheets. This MSDS is subject to change without notice, for the latest version of this MSDS visit www.supagas.co.nz

Reviewed 6 June 2010.