

Acetylene



SAFETY DATA SHEET

Issued: 30/11/2010 | Version 0

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name Acetylene
Chemical Formula C₂H₂
Recommended Use Welding
REACH Registration No. 05-2115731001-69-0000
Company Name Irish Oxygen Co Ltd,
Waterfall Road, Cork
Email sds@irishoxygen.com
Emergency Phone 021-4541821
(office hours only)

2. HAZARDS IDENTIFICATION

Dissolved gas
Extremely flammable

GHS Hazard Pictograms



3. COMPOSITION INFORMATION

Substance/Preparation Substance
Composition No other components
CAS No 00074-86-2
EINECS No 200-816-9

4. FIRST AID MEASURES

Inhalation

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.

Remove victim to uncontaminated area wearing self breathing apparatus. Keep victim warm and rested. Call a doctor.

Apply artificial respiration if breathing stopped.

Ingestion

Not considered a potential route of exposure

Skin contact

Not considered a potential route of exposure

Eye contact

Not considered a potential route of exposure

5. FIRE FIGHTING MEASURES

Specific hazard

Exposure to fire may cause containers to rupture or explode which may release asbestos. Inform Fire Brigade

Hazardous combustion products

Incomplete combustion may form carbon monoxide.

Suitable extinguishing media

All known extinguishers can be used.

Specific methods

If possible, stop flow of product.

Continue water spray from protected position until container stays cool.

Move container away or cool with water from 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.

Special procedures for leaking acetylene cylinder: Leak not ignited – cylinder NOT hot

Extinguish all ignition sources

Check to make sure cylinder is not getting hot (use back of bare hand)

Check the valve is properly closed using moderate force (hand tight)

DO NOT try to tighten cylinder valve in the body of the cylinder or tamper with safety devices

If the leak persists

Evacuate personnel from the area

Ensure maximum ventilation by opening all doors and windows

Take cylinder outside to a ventilated area

Warn everyone in the area of a gas leak especially those downwind

Inform Irish Oxygen

If the cylinder shows signs of heating

DO NOT move the cylinder or open the valve

Evacuate personnel to safe area

Call the fire brigade

Inform Irish Oxygen

Leak ignited (cylinder not getting hot)

- Extinguish all ignition sources
- Extinguish the flame with a dry powder extinguisher or wet rag if safe to do so
- Wear leather gauntlets and keep hands clear of any fusible plugs
- Close cylinder valve
- Check the cylinder for signs of heating (using the back of your bare hand)

Fire external to cylinder

- Evacuate the area minimum 200 metres around cylinder
- Call the fire brigade
- Advise neighbours within 200 metres of hazard
- Inform Irish Oxygen

7. HANDLING AND STORAGE

Close cylinder valve when not in use to prevent contamination of cylinder. Open valve slowly to avoid pressure shock. Purge air from system before introducing gas. Do not allow back feed into cylinder. Use only properly specified equipment that is suitable for Acetylene, its supply pressure and temperature. Keep cylinder below 50°C in a well ventilated place. Store and use acetylene cylinders upright. If a cylinder has been left or transported horizontally leave upright for one hour before use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ensure adequate ventilation.
Do not smoke while handling acetylene cylinder or equipment.
Wear suitable hand, body and head protection.
Wear goggles with suitable filter lenses when use in cutting or welding.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Colour/Odour	Colourless gas with a slight garlic like odour
Molecular Weight	26
Melting Point	-80.8°C
Boiling Point	-84°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
Auto ignition temperature	325°C
Flammability Range	2.4%-88% volume in air
Other Data	Poor warning properties at low concentrations.

10. STABILITY AND REACTIVITY

Can form explosive mixture with air.
May decompose violently at high temperature and/or high pressure or in the presence of a catalyst.
Forms explosive acetylides with copper, silver and mercury.
Do not use alloys containing more than 65% copper or 43% silver.
Dissolved in solvent contained in a porous mass.
May react violently with oxidants.

11. TOXICOLOGICAL INFORMATION

No toxicological effects from this product.

12. ECOLOGICAL INFORMATION

No ecological damage caused by this product.

13. DISPOSAL CONSIDERATIONS

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 flash back arrester.
Do not discharge into any place where its accumulation could be dangerous
Some acetylene cylinders may contain asbestos, specialist disposal required

14. TRANSPORT INFORMATION

UN Number:	1001
Class/Div:	2.1
ADR/RID Classification code:	4F
ADR/RID Hazard Number:	239
Labelling ADR:	2.1:flammable gas

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 emergency. Before transporting product cylinders, ensure that they are firmly secured, that cylinder valve is closed and not leaking, that there is adequate ventilation and that applicable regulations are complied with

15. REGULATORY INFORMATION

Number in Annex 1 of Dir 67/548	601-015-00-0
EC Classification	R5/R6/R12/F+
Risk Phrases	F+ Extremely flammable R5 Heating may cause an explosion R6 Explosive with or without contact with air R12 Extremely flammable
Safety Phrases	S9 Keep cylinder in a well ventilated place S16 Keep cylinder away from ignition sources S33A Keep cylinder away from possible static discharge

16. OTHER INFORMATION

The information given here is based on the present state of knowledge and describes the product under the aspects of safety. It should not therefore be construed as guaranteeing specific properties. 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.

CYLINDER DETAILS

Cylinder Type	Nominal Capacity M ³	Approx Dimensions (mm)	Approx gross Cylinder weight (Kg)
AC12	12	1224 x Ø305	93
AC8.5	8.5	980 x Ø305	70
AC7	7.0	1036 x Ø254	56
ACMW	1.5	648 x Ø152	12
ACMCP	108	1250x930x1300	950

Outlet Connection: BS341 No 4: Left hand 5/8" BSP female cone recessed.