

Specshield Hydrogen/Argon

(mixtures containing between 2.93% - 21% hydrogen)

PRODUCT: SPECSHIELD 2.93% TO 21% HYDROGEN/ARGON MSDS NR: 302-15-0032 BOC (A) VERSION: 1 DATE: 28/07/03 PAGE: 1/2

1 IDENTIFICATION OF THE SUBSTANCE/ PREPARATION AND OF THE COMPANY

Product name	Specshield 2.93% to 21% Hydrogen/Argon
Company identification	see heading and/or footer
Emergency phone Nos	see heading and/or footer

2 COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Preparation	Preparation
Components/Impurities	Contains Hydrogen (F+;R12) (EINECS No. 215-605-7) balance Argon (EINECS No. 231-147-0). Check the cylinder collar for the exact composition.
EEC Nr (from EINECS)	Not applicable for preparations.

3 HAZARDS IDENTIFICATION

Hazards identification	Extremely flammable. Compressed gas.
-------------------------------	---

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. Remove victim to uncontaminated area wearing self-contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.
Ingestion	Ingestion is not considered a potential route of exposure.

5 FIRE FIGHTING MEASURES

Specific hazards	Exposure to fire may cause containers to rupture/explode. Inform Fire Brigade.
Hazardous combustion products	None
Suitable extinguishing media	All known extinguishants can be used.
Specific methods	If possible, stop flow of product. Move away from the container and cool with water from a 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. Post warning notices (including no smoking).
Leak not ignited	Extinguish all sources of ignition in the immediate area. Close the cylinder valve. If necessary tighten the gland nut. If leak continues, evacuate the area and avoiding sources of ignition and minimising personal risk, move the leaking cylinder to a safe outside area. Notify BOC. Post warning notices and prevent access to the area. DO NOT attempt to tighten the cylinder valve in the body of the cylinder. Do not tamper with the safety devices.
Leak ignited	Raise fire alarm. Close cylinder valve if safe to do so. Call fire brigade. Evacuate the area. If possible apply copious quantities of water from a hose to the affected cylinder(s) from a protected position until the cylinder(s) are cold. DO NOT move cylinders until cold.
Environmental precautions	Try to stop release. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.
Clean up methods	Ventilate area.

7 HANDLING AND STORAGE

Handling and storage	Ensure equipment is adequately earthed. Suck back of water into the container must be prevented. Purge air from system before introducing gas. Do not allow backfeed into the container. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt. Keep away from ignition sources (including static discharges). Segregate from oxidant gases and other oxidants in store. Refer to supplier's container handling instructions. Keep container below 50°C in a well ventilated place.
-----------------------------	--

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protection	Ensure adequate ventilation. Do not smoke while handling product.
----------------------------	---

9 PHYSICAL AND CHEMICAL PROPERTIES

Relative density, gas	Heavier than air
Solubility mg/l water	Not known
Appearance/Colour	Colourless gas
Odour	None
Other data	Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level. Will displace oxygen when ventilation is at high point only.

SAFETY DATA SHEET

10 STABILITY AND REACTIVITY

Stability and reactivity Can form explosive mixture with air. May react violently with oxidants.

11 TOXICOLOGICAL INFORMATION

General No known toxicological effects from this product.

12 ECOLOGICAL INFORMATION

General No known ecological damage caused by this product.

13 DISPOSAL CONSIDERATIONS

General 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 arrestor. Do not discharge into any place where its accumulation could be dangerous. Contact supplier if guidance is required.

14 TRANSPORT INFORMATION

UN Nr 1954
Class/Div 2.1
ADR/RID Classification Code 1F
ADR/RID Hazard Nr 23
Labelling ADR Label 2.1: flammable gas
Other transport information 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 that they are firmly secured and:
 – cylinder valve is closed and not leaking
 – valve outlet cap nut or plug (where provided) is correctly fitted
 – valve protection device (where provided) is correctly fitted
 – there is adequate ventilation
 – compliance with applicable regulations

15 REGULATORY INFORMATION

Number in Annex I of Dir 67/548 Not applicable for preparations.
EC Classification F+;R12
Labelling of cylinders
 – **Symbols** Label 2.1: Flammable gas
 – **Risk phrases** R12 Extremely flammable.
 – **Safety phrases** S9 Keep container in well ventilated place.
 S16 Keep away from ignition sources – No smoking.
 S33 Take precautionary measures against static discharges.

16 OTHER INFORMATION

Ensure all national/local regulations are observed.

Ensure operators understand the flammability hazard.

The hazard of asphyxiation is often overlooked and must be stressed during operator training.

Users of breathing apparatus must be trained.

This Safety Data Sheet has been established in accordance with the applicable European Directives and applies to all countries that have translated the Directives in their national laws.

Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out.

Although this shielding gas alone does not exhibit toxic/harmful effects, the fumes generated from a welding process can be hazardous to health.

Always leak check cylinders when first collected, delivered or used using an approved leak detection fluid.

Details given in this document are believed to be correct at the time of going to press. 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.

For further safety information please refer to "Safe Under Pressure" and "Safe handling, storage and transport of industrial gas cylinders", both of which are available from your local BOC outlet.

NOTES

Not all sizes of cylinders and MCP's are available at all outlets

OUTLET CONNECTION: 5/8" BSP Female Left Hand Cone Recessed

CYLINDER CHARACTERISTICS

Cylinder Size	Maximum Filled Pressure at 15°C (bar)	Approx. Dimensions incl. valve and guard where supplied (mm)	Approx. Full Cylinder weight (kg)	Manifold Cylinder Pallets (MCP's)	Maximum Filled Pressure at 15°C (bar)	Approx. Dimensions incl. cylinders (mm)	Max. Gross Weight (kg)
W	200	230 x 1460	81	WN (15 x N)	200	1290 x 1810 x 840	1500



A member of The BOC Group
 The stripe symbol and the word BOC are BOC Group Trademarks.
 © The BOC Group 2003

For product and safety enquiries please phone

In the United Kingdom:
0800 111 333

BOC Customer Service Centre
 Priestley Road, Worsley
 Manchester M28 2UT
 Fax: 0800 111 555

In the Republic of Ireland:
1850 333435

BOC Ireland
 P.O. Box 201
 Bluebell, Dublin 12
 Fax: 01 409 1801

SFT/008064/APUK/0703/5C