BOC GASES

A Member of The Linde Group MATERIAL SAFETY DATASHEET (MSDS)

SHIELDING GASES (Ar/CO2/He)

(Please ensure that this MSDS is received by the appropriate person)

DATE: January 2018

Version 2

PRODUCT AND COMPANY IDENTIFICATION 1

Product Name Chemical Formula Trade Names Colour coding	Shielding Gases, Universal and Heavy Argon plus CO ₂ plus Helium Stainshield Heavy Stainshield Heavy: Silver body and a brown shoulder, with the relevant stencilling to identify the product
Valve	Brass 5/8 inch BSP right hand female valves fitted.
Company Identification	AFROX Malawi Limited Johnstone Road Ginnery Corner Blantyre Tel No: +265(1) 871 611 Fax No: +265(1)871 260
EMERGENCY NUMBER	+265(1) 871 611 (24 hours)

2 HAZARDS IDENTIFICATION

Hazards Identification

In high concentrations may cause asphyxiation. Compressed Gas

3 COMPOSITION/INFORMATION ON INGREDIENTS

UN No. ERG No.

Chemical Name

Argon plus CO2 plus Helium 1956

2C non-flammable gas Hazard Warning Substance/Preparation Preparation Components/Impurities Contains the following components: Stainshield Heavy 38% He 2% CO2 balance Ar. Stainshiel Universal 55% He 2% CO2 balance Ar FFC No. Not applicable for preparation

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4 FIRST AID MEASURES

Indestion

Ingestion is not considered a potential route of exposure. Inhalation

In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. Low concentrations of CO₂ cause increased respiration and headache. Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.

5 FIRE FIGHTING MEASURES

Specific Hazards

Exposure to fire may cause containers to rupture/explode. Inform Fire Brigade. Non flammable.

Hazardous Combustion Products

None Suitable Extinguishing Media

All known extinguishants can be used.

Specific Methods

If possible, stop flow of product. Move away from container and cool with water from a protected position.

Special Protective Equipment for Fire Fighters

In confined space, use self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Evacuate area. Wear self-contained breathing apparatus when entering are unless atmosphere is proved to be safe. Ensure adequate air ventilation. Post warning notices.

Environmental Precautions

Try to stop release.

Ref. No.: MS092

Clean Up Methods Ventilate area.

7 HANDLING AND STORAGE

Suck back of water into the container must be prevented. Do not allow back-feed into the container. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. CONTACT THE NEAREST AFROX BRANCH. Refer to AFROX container handling instructions. Keep container below 50°C in a well ventilated place.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal Protection

Ensure adequate ventilation. **Exposure Limits** Carbon Dioxide: LTEL: 5000ppm STEL: 15000ppm [EH40/2002]

PHYSICAL AND CHEMICAL PROPERTIES 9

PHYSICAL DATA Relative density, gas Lighter or similar to air Solubility mg/l water Not known Colourless gas Colour Odour None

10 STABILITY AND REACTIVITY

Stability and reactivity

Stable under normal conditions

11 TOXICOLOGICAL INFORMATION

Carbon Dioxide - In high concentrations cause rapid circulatory insufficiency. Symptoms are headache, nausea and vomiting, which may lead to unconsciousness.

(For further information see Section 3. Adverse Health effects)

12 ECOLOGICAL INFORMATION

Carbon Dioxide - When discharged in large quantities may contribute to the greenhouse effect.

13 DISPOSAL CONSIDERATIONS **Disposal Methods**

Do not discharge in any place where its accumulation could be dangerous. Contact AFROX if guidance is required.

14 TRANSPORT INFORMATION **PROPER SHIPPING NAME**

Compressed gas, N.O.S. [Helium, Argon] **ROAD TRANSPORTATION** UN No 1956 Class/Div 2.2 ADR/RID Classification Code 1A ADR/RID Hazard No 20 Labelling ADR Label 2.2: non-flammable non-toxic 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
- Adequate ventilation
- Compliance with applicable regulations





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15 REGULATORY INFORMATION

EEC Classification Not classified as dangerous substance National legislation OHSact and Regulations 85 of 1993. Reference SANS 10234 and its supplement.

16 OTHER INFORMATION

Ensure all national/local regulations are observed.

- Asphyxiant in high concentrations.
- Keep container in well ventilated place.

Do not breathe the gas.

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

Users of breathing apparatus must be trained.

The 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 "Guidance for the carriage of gas cylinders on vehicles" both of which are available from your local AFROX outlet.

Bibliography

Compressed Gas Association, Arlington, Virginia Handbook of Compressed Gases - 3rd Edition Matheson. Matheson Gas Data Book - 6th Edition

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