

MATERIAL SAFETY DATA SHEET (MSDS) P-10 QUENCH GAS

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

Date: August 2016 Ref. No. MS046

Version 2

PRODUCT AND COMPANY IDENTIFICATION

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Valve

Product Name P-10 QUENCH GAS Chemical Formula CH4 plus Ar Trade Names P-10 Quench Gas

10% Methane/Balance Argon

Colour coding Peacock Blue (F.08) body with Red (A11) and

Silver (Plascon 720/022) bands on the shoulder. The red band shall be adjacent to the valve. The relevant decal shall be affixed centrally to the body of the cylinder.

3 SH - Brass, 5/8 inch BSP left hand female.

Company Identification African Oxygen Limited

23 Webber Street Johannesburg, 2001 Tel. No: (011) 490-0400 Fax No: (011) 490-0506

0860020202 or 086 011 1185 (24 hours) EMERGENCY No.

2 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Families Paraffin plus Inert gas

UN No 1954 Hazchem Code: 2 SE

Hazchem Warning 2 A Flammable gas

HAZARDS IDENTIFICATION

Both methane and argon do not support life. Main Hazards They can act as simple asphyxiants by diluting the concentration of oxygen in air below the levels necessary to support life. As the mixture is heavier than air it will tend to concentrate at lower levels. All cylinders are portable gas containers, and must be regarded as transportable vessels at all times.

Adverse Health effects. Apart from being an asphyxiant the mixture has no adverse health effects.

Chemical hazards None **Biological Hazards** None

Vapour Inhalation Simple asphyxiant No known effect Eye contact Skin contact No known effect Ingestion (See "Vapour Inhalation")

4 FIRST AID MEASURES

Prompt medical attention is mandatory in all cases of overexposure to methane/argon mixtures. Rescue personnel should be equipped with self-contained breathing apparatus. Conscious persons should be assisted to an uncontaminated area and inhale fresh air. Quick removal from the contaminated area is most important. Unconscious persons should be removed to an uncontaminated area, and given mouth-to-mouth resuscitation and supplemental oxygen.

Eye Contact No known effect. Skin Contact No known effect. Ingestion (See section 3. above).

FIRE FIGHTING MEASURES

Extinguishing media As methane/argon mixture does contribute significantly to the fire, it could help with the extinguishing by reducing the oxygen content of the air by dilution to below the level to support combustion.

Specific hazards The mixture does not support life. It can act as a simple asphyxiant by diluting the concentration of oxygen in the air below the levels to support life. Methane could also separated from the Argon, and collect in confined areas, possible forming explosive Methane/Air mixtures.

Emergency actions If possible, shut off the source of excess mixture. Evacuate area. All cylinders should be removed from the

vicinity of the fire. Cylinders that cannot be removed should be cooled with water from a safe distance to prevent the build-up of excessive pressure. Cylinders which have been exposed to excessive heat should be clearly identified and returned to the supplier. CONTACT THE NEAREST AFROX BRANCH.

Protective clothing Self-contained breathing apparatus. Safety gloves and shoes, or boots, should be worn when handling cylinders. Environmental precautions. The mixture is heavier than air and could accumulate in low-lying areas. Care should be taken when entering a potentially oxygen-deficient environment. If possible, ventilate the affected area.

ACCIDENTAL RELEASE MEASURES

Personal precaution. Do not enter any areas where the mixture has

been spilled unless tests have shown that it is

safe to do so.

Environmental precautions. The mixture does not pose a hazard to

the environment.

Small spills Shut off the source of the escaping mixture.

Ventilate the area.

Large spills Evacuate the area. Shut off the source of the

spill if it can be done without risk. Restrict access to the area until completion of the clean-up procedure. Ventilate the area using

forced draught if necessary.

HANDLING AND STORAGE

Do not allow cylinders to slide or come into contact with sharp edges. P-10 cylinders may be stacked horizontally provided that they are firmly secured at each end to prevent rolling. Use "first in - first out" inventory system to prevent full cylinders from being stored for excessive periods of time. Keep out of reach of children.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure hazards As the mixture is a simple asphyxiant, avoid any areas where spillage has taken place. Only enter once testing has proved the atmosphere

to be safe, and remember that the gas is heavier than air.

Engineering control measures

Engineering control measures are preferred to reduce exposures to oxygen-depleted atmospheres. General methods include forceddraught ventilation, separate from other

exhaust ventilation systems.

Personal protection Self contained breathing apparatus should

always be worn when entering area where oxygen depletion may have occurred. Safety goggles, gloves and shoes or boots should be worn when handling containers.

PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DATA

Argon

Chemical Symbol Αг Molecular Weight 39,948 Specific volume @ 20°C & 101,325 kPa 603,7 ml/g Relative density of gas @ 101,325 kPa (Air = 1) 1,380 Colour None Taste None Odour None Methane

Chemical Symbol CH4 Molecular Weight 16.043 1402,4 ml/g Specific volume @ 20°C & 101,325 kPa Relative density of gas @ 101,325 kPa (Air = 1) 0,555

Flammability limits in air - 15,4% by vol. Colour None Taste None



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Odour Sweet, oil-type

10 STABILITY AND REACTIVITY

Conditions to avoid The dilution of oxygen concentration in the

atmosphere to levels which cannot support life. Never use cylinders as rollers or supports, or for any other purpose than the storing of P-10 Quench gas. Never expose the cylinders to excessive heat, as this may cause sufficient

build-up of pressure to rupture the cylinders.

Incompatible As the mixture is inert it may be contained in materials systems constructed of any of the common

metals which have been designed to safely

withstand the pressures involved. Hazardous Decomposition Products None

11 TOXICOLOGICAL INFORMATION

Acute Toxicity No known effect No known effect Skin & eye contact Chronic Toxicity No known effect Carcinogenicity No known effect Mutagenicity No known effect. Reproductive Hazards No known effect

(For further information see Section 3, Adverse health effects).

12 ECOLOGICAL INFORMATION

The mixture is heavier than air, and can cause pockets of oxygendepleted atmosphere in low-lying areas. It does not pose a hazard to the ecology.

13 DISPOSAL CONSIDERATIONS

Disposal Methods Small amounts may be blown to the

atmosphere under controlled conditions. Large amounts should only be handled by

the gas supplier.

The disposal of cylinders must only be Disposal of packaging

handled by the gas supplier.

14 TRANSPORT INFORMATION

ROAD TRANSPORTATION

UN No. 1954 Hazchem code 2 SF

Hazchem warning 2 A Flammable gas

SEA TRANSPORTATION

IMDG 1954

Flammable gas

AIR TRANSPORTATION

ICAO/IATA Code 1954 Class 2.1

Packaging instructions

- Cargo 200 - Passenger Forbidden

Maximum quantity allowed

- Cargo 150 kg Forbidden - Passenger

15 REGULATORY INFORMATION

EEC Hazard class Flammable gas

National legislation OHSact and Regulations (85 of 1993)

Refer to SANS 10234 for explanation of the above

16 OTHER INFORMATION

Bibliography

Compressed Gas Association, Arlington, Virginia Handbook of Compressed Gases - 3rd Edition Matheson. Matheson Gas Data Book - 6th Edition SABS 0265 - Labelling of Dangerous Substances

17 EXCLUSION OF LIABILITY

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