1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 80% Argon 20% CO2 Mix
CHEMICAL NAME: Argon Carbon Dioxide Mixture
FORMULA: Ar/CO2
CAS No.: Ar 7440-37-1
CO2 124-38-9
[USE]: Inert atmospheres, shielding gas for welding and metal refining.

NAME AND ADDRESS:
Motukea Gas Company Limited,
Motukea Island, Porebada Road,
Port Moresby, PNG
Contact Telephone: (675) 321-8187

2. COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENT NAME: Argon and CO2 Gas Mix
Argon Ar 80%
Carbon Dioxide CO2 20%
OSHA PEL: None
ACGIH TLV: xxxx
[LD50]: None. [LC50]: None.

3. HAZARDS IDENTIFICATION

NOT CLASSIFIED AS HAZARDOUS ACCORDING TO NOHSC CRITERIA CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE.
DANGER:
CONTENTS UNDER PRESSURE
DO NOT PUNCTURE OR INCINERATE CONTAINER,
MAY EXPLODE IF HEATED

4. FIRST AID MEASURES

INHALATION: Remove person to fresh air. If not breathing, administer artificial respiration. If breathing is difficult, obtain medical attention.
EYE CONTACT: Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, then consult a doctor.
SKIN CONTACT: Generally the product does not irritate the skin.
INGESTION: Not applicable.
NOTES TO PHYSICIAN: None.
5. FIRE FIGHTING MEASURES

FLASH POINT: Not applicable; gas.
AUTOIGNITION: None
FLAMMABLE LIMITS IN AIR BY VOLUME: NA
EXTINGUISHING MEDIA: Use an extinguishing agent suitable for the surrounding fire
SPECIAL FIRE FIGHTING INSTRUCTIONS: Wear self-contained respiratory protective device.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Contains gas under pressure. Cylinders may rupture violently if sidewalls are exposed to direct flame impingement. Cylinders exposed to fire should not be moved until they have reached ambient temperature.

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Before dealing with spillage take the necessary protective measures, inform others to keep at a safe distance. Contact supplier for specific assistance. Allow gas to escape to atmosphere, preferably in an open remote location. Prevent vented gas from re-entering ventilation intakes, low-lying spaces, cellars, drains, sewers or similar.

7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN STORAGE: Store cylinders upright in an enclosure, preferably outside of buildings, protected from direct sunlight. Secure cylinders by chains or similar device to prevent falling over. Store cylinders below 45°C. Keep away from flammable or combustible materials. Keep away from vehicular traffic and other thoroughfares. Prevent leaking gases from collecting in enclosed or low-lying spaces - gas in heavier than air. Protect from physical damage. Protect regulators and other fittings from impact. High pressure gas. Do not puncture or incinerate container. Use equipment rated for cylinder pressure. Close valve after each use and when empty.

PRECAUTIONS TO BE TAKEN IN HANDLING: should not be used as a substitute for compressed air in pneumatic equipment. Use a first-in, first out inventory system to prevent full containers from being stored for long periods of time.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION ENGINEERING CONTROLS

ENGINEERING CONTROLS:
VENTILATION: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits
RESPIRATORY PROTECTION (SPECIFY TYPE): General
Use: None required.
PROTECTIVE GLOVES: Work gloves are recommended when handling cylinders.
EYE PROTECTION: Safety glasses are recommended when handling cylinders.
OTHER PROTECTIVE EQUIPMENT: Safety shoes are recommended when handling cylinders.
PRECAUTIONS: Do not wear oily clothes. Do not use oily or greasy cloth for cleaning cylinder or valves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Colourless gas
Boiling Point: -186°C (@ 101.32kpa)
Vapour Pressure: Not applicable
Volatile: 100%
Evaporation Rate: Not applicable
Odour: Odourless
Vapour Density: 1.38 @ 0°C (Air=1)
Weight per ml: Not applicable
Flash Point: None
Flammability Limits: None
Auto-Ignition Temperature: None
Other Properties: Inert gas does not form true compounds. May form a stable clathrate with β-
hydroquinone, which may be stored. May form a hydrate at more than 100 atmospheres pressure. Carbon Dioxide is readily absorbed by alkali hydroxides (both solid and as solutions) forming carbonates, and reacts with active metals.

10. STABILITY AND REACTIVITY

Moist Carbon Dioxide is corrosive, therefore acid resistant materials are required. May evolve toxic gasses if heated to decomposition.

11. TOXICOLOGICAL INFORMATION

General: May replace oxygen in the inhaled air and cause asphyxiation if the amount of oxygen inhaled is reduced from:

- 21-14% - pulse rate will accelerate, attention span is diminished, muscular co-ordination can be disturbed.
- 14-10% - judgement becomes impaired, severe injuries may cause no pain, suffer fatigue.
- 10 - 6% - may cause nausea and vomiting, permanent brain damage is possible.
- 6% or less - Convulsions may occur. Inhaling no oxygen would result in death within a few minutes.

12. ECOLOGICAL INFORMATION

General: Although a natural component of the earth's atmosphere, an increase in the atmospheric level of carbon dioxide has been linked with global warming. Therefore emission of Carbon Dioxide into the atmosphere should be minimised. Fumes from fabrication processes may be harmful to the environment.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Do not attempt to dispose of residual or unused quantities. Return cylinder properly labeled to Motukea Gas Company. Unserviceable cylinders should be returned for safe and proper disposal.

14. TRANSPORT INFORMATION

DOT/IMO SHIPPING NAME: ARGON COMPRESSED
HAZARD CLASS: 2.2
Hazchem code: 2TE
IDENTIFICATION NUMBER: UN 1956
PRODUCT RQ: None.
SHIPPING LABEL(s): NONFLAMMABLE GAS, NON TOXIC
PLACARD (When required): Argon/CO2 Compressed
SPECIAL SHIPPING INFORMATION: Cylinders should be transported in a secure position, in a well ventilated vehicle. The transportation of compressed gas cylinders in automobiles or in closed-body vehicles can present serious safety hazards and should be discouraged.

15. REGULATORY INFORMATION

The following information concerns selected regulatory requirements potentially applicable to this product. Not all such requirements are identified. Users of this product are responsible for their own regulatory compliance on a federal, state [provincial], and local level.

Product related hazard information:
Poison Schedule: Not scheduled.
Safety phrases:
Keep container in a well-ventilated place. Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).

16. OTHER INFORMATION

Do not use leaking or damaged cylinders, regulators and fittings. Do not use oil or grease on cylinders or fittings. Always use mechanical handling and/or lifting devices. Open cylinders slowly to avoid pressure shocks on downstream equipment. Always use gas pressure regulators properly matched to downstream equipment.
Further information about argon can be found in the following pamphlets published by: Compressed Gas Association Inc. (CGA), 1725 Jefferson Davis Highway, Suite 1004, Arlington, VA 22202-4102. Telephone: (703) 412-0900.

G-10.1 Commodity Specification for Nitrogen
P-1 Safe Handling of Compressed Gases in Containers
P-9 Inert Gases – Argon, Nitrogen, and Helium
SB-2 Oxygen-Deficient Atmospheres

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