

**SAFETY DATA SHEET (SDS)
CO-METHCAL GAS STANDARDS**

Please ensure that this SDS is received by the appropriate persons

Review Date: 11/11/2021 v01

Emergency: 0860 02 02 02

Document Number: AFX-SDS-0039

1. PRODUCT AND COMPANY IDENTIFICATION

Product: Carbon Monoxide/Methane/Air calibration gas standards

Chemical Formula: CO plus CH₄ plus O₂ plus N₂

Trade Name: COMETHCAL 100/14:
105-120 ppm CO, 1.3-1.5% CH₄
COMETHCAL 130/15:
120-140 ppm CO, 1.4-1.6% CH₄
COMETHCAL 150/14:
149-180 ppm CO, 1.30-1.49% CH₄
COMETHCAL 200/14:
160-240 ppm CO, 1.30-1.49% CH₄
COMETHCAL 400/24:
400-480 ppm CO, 2.30-2.45% CH₄
COMETHCAL 450/14:
360-540 ppm CO, 1.30-1.49% CH₄
COMETHCAL 400/24/17:
400-480 ppm CO, 2.30-2.45% CH₄, 16-18% O₂
COMETHCAL 400/14/17:
400-480 ppm CO, 1.30-1.45% CH₄, 16-18% O₂

Colour Coding: Silver body with a red shoulder, and yellow circular band just below the red shoulder. The relevant "COMETHCAL" decal shall be affixed centrally to the body of the cylinder.

Product Code: 519130-NE-A
519131-NE-A
519135-NE-A
519136-NE-A
519134-NE-A
519129-NE-A
519138-NE-A
519133-NE-A

Company Identification: Grayston Office Park Building 7
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Tel. No: (011) 490-0400
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www.afrox.com

Emergency Numbers: 0860 02 02 02 (Afrox)

Adverse Health Effects:

Chemical Hazards:

- Oxygen is non-flammable, but readily supports combustion. Never permit oil, grease or other readily combustible substance to come into contact with high concentrations of oxygen.
- Nitrogen does not support life. It can act as a simple asphyxiant by diluting the concentration of oxygen in air below the levels necessary to support life.
- All cylinders are transportable gas containers.

Carbon monoxide:

Concentrations in excess of 50 ppm carbon monoxide will produce symptoms of poisoning if breathed for a sufficiently long time.

Methane:

It is a physiologically inert, except when it lowers the partial pressure of oxygen in the air enough to cause systemic effects due to oxygen-deficiency.

Oxygen:

Central nervous system toxicity including dizziness, convulsions and loss of consciousness can occur after only 2-3 hours of exposure to pure oxygen at 2 or more atmospheres. Retrosternal soreness, associated with coughing and breathing difficulties, made worse by smoking and exposure to cold air can occur after breathing pure oxygen at atmospheric pressure for several hours.

Nitrogen:

Excessive inhalation at high concentrations can result in dizziness, nausea, vomiting, loss of consciousness and death.

Carbon monoxide:

No known hazards.

Methane:

There are no hazardous products formed when methane burns in air.

Oxygen:

Is non-flammable, but strongly supports combustion.

Nitrogen:

Is relatively inert to most materials under ordinary conditions. It becomes more reactive at elevated temperatures, and combines with hydrogen, oxygen and some metals.

None.

Biological Hazards:

Vapour Inhalation:

- Carbon monoxide combines with the haemoglobin in the blood to form carboxyhaemoglobin, which is unable to transport oxygen. The symptoms of carbon monoxide poisoning are largely due to anoxia.
- Methane in high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness.
- Oxygen is a local irritant to mucous membranes and, with extended continued

2. HAZARD IDENTIFICATION

Classification: Classification under the Globally Harmonized System of classification and labelling of chemicals (GHS).

Emergency Overview: Colour: None
Odour: None
Taste: None
Physical State: Compressed Gas
Form: Gas under pressure

Main Hazards: All cylinders are portable gas containers and must always be regarded as pressure vessels.
- The carbon monoxide component of the above gas standards is a chemical asphyxiant.
- Although the methane component of these gas mixtures will burn when ignited by a flame, the methane will not add significantly to the fire.

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exposure, can be destructive to lung tissue.
- Nitrogen acts as a simple asphyxiant death may result from errors in judgement, confusion, or loss of consciousness which prevents self-rescue. At low oxygen concentrations, unconsciousness and death may occur in seconds without warning.

Eye Contact:

No known effect.

Skin Contact:

No known effect.

Ingestion:

(See "Vapour Inhalation" above).

GHS

Classification:

Carbon monoxide:

- Flammable gas (Category 1).
- Acute toxicity, Inhalation gas (Category 3).
- Toxic to reproduction (Category 1).
- Specific Target Organ Toxicity, Repeated Exposure (Category 1).

Methane:

- Flammable gas (Category 1).

Oxygen:

- Oxidizing gas (Category 1).

Nitrogen:

- Non-flammable gas (Category 3)

GHS

Pictogram:



GHS Signal

Danger

Words:

GHS Hazard

Statements:

Carbon monoxide:

- H220
- Extremely flammable gas.
- H280
- Contains gas under pressure; may explode if heated.
- H331
- Toxic if inhaled.
- H360
- May damage the unborn child.
- H372
- Causes damage to organs through prolonged or repeated exposure.

Methane:

- H220
 - Extremely flammable gas.
 - H280
 - Contains gas under pressure; may explode if heated.
- Oxygen:
- H270
 - May cause or intensify fire; oxidizer.
 - H280
 - Contains gas under pressure; may explode if heated.

Nitrogen:

- H280
- Contains gas under pressure; may explode if heated.

GHS

Precautionary
Statements:

Carbon monoxide:

Prevention:

P201+P202: Do not handle until all safety precautions have been read and understood.

P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P260+P261: Avoid breathing dust/fume/gas/mist/vapours/spray.

P264: If on skin (or hair) remove immediately all contaminated clothing. Rinse skin with water/shower.

P270: Do not eat, drink or smoke when using this product.

P271: Use only outdoors or in a well-ventilated area.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P308 + P313: IF exposed or concerned: Get medical advice/attention.

P311: Call manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice.

P314: Get medical advice/attention if you feel unwell.

P321: Specific treatment (See "First Aid Measures" below).

P377: Leaking gas fire. Do not extinguish unless leak can be stopped safely.

P381: Eliminate all ignition sources if safe to do so.

Storage:

P410+P403: Protect from sunlight. Store in a well-ventilated place.

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

P405: Store locked up.

Disposal:

P501: Dispose of content/container in accordance with local/regional/national/international regulations.

Methane:

Prevention:

P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Response:

P377: Leaking gas fire. Do not extinguish unless leak can be stopped safely.

P381: Eliminate all ignition sources if safe to do so.

Storage:

P410+P403: Protect from sunlight. Store in a well-ventilated place.

Oxygen:

Prevention:

P220: Keep/Store away from combustible materials. Manufacturer/supplier or the competent authority to specify other incompatible materials.

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P244: Keep valves and fittings free from oil and grease.

Response:

P307+P376: In case of fire: Stop leak if safe to do so.

Skin Contact:

Adverse effects not expected from this product.

Carbon monoxide:

Not relevant, due to the form of the product.

Storage:

P410+P403: Protect from sunlight. Store in a well-ventilated place.

Nitrogen:

P410+P403: Protect from sunlight. Store in a well-ventilated place.

Carbon monoxide:

- Chemical asphyxiant.
- Exposure to low concentrations for extended periods may result in dizziness or unconsciousness and may lead to death.

Methane:

Adverse effects not expected from this product.

Oxygen:

Adverse effects not expected from this product.

Nitrogen:

Adverse effects not expected from this product.

Other Hazards that do not result in classification:

Ingestion:

Carbon monoxide:

Ingestion is not considered a potential route of exposure.

Methane:

Ingestion is not considered a potential route of exposure.

Oxygen:

Ingestion is not considered a potential route of exposure.

Nitrogen:

Ingestion is not considered a potential route of exposure.

Inhalation:

Carbon monoxide:

- Remove victim to uncontaminated area wearing self-contained breathing apparatus.

- Keep victim warm and rested.

- Call a doctor.

- Apply artificial respiration if breathing stopped.

Methane:

- 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.

Oxygen:

- Move the exposed person to fresh air at once.

Nitrogen:

- 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.

3. COMPOSITION OF INGREDIENTS

Chemical name:	Carbon monoxide (CO) Methane (CH ₄) Oxygen (O ₂) Nitrogen (N ₂)
Chemical family:	Carbon monoxide Methane Oxygen Nitrogen
CAS No:	<u>Carbon monoxide:</u> 630-08-0 <u>Methane:</u> 74-82-8 <u>Oxygen:</u> 7782-44-7 <u>Nitrogen:</u> 7727-37-9
UN No:	<u>Carbon monoxide:</u> 1016 <u>Methane:</u> 1971 <u>Oxygen:</u> 1072 <u>Nitrogen:</u> 1066
ERG No:	<u>Carbon monoxide:</u> 119 <u>Methane:</u> 115 <u>Oxygen:</u> 122 <u>Nitrogen:</u> 121
Hazard class:	<u>Carbon monoxide:</u> 2.2 <u>Methane:</u> 2.1 <u>Oxygen:</u> 2.2 <u>Nitrogen:</u> 2.2
Hazchem Warning:	<u>Carbon monoxide:</u> Toxic gas <u>Methane:</u> Flammable gas <u>Oxygen:</u> Non-flammable gas <u>Nitrogen:</u> Non-flammable gas

4. FIRST AID MEASURES

Eye contact:	<u>Carbon monoxide:</u> Adverse effects not expected from this product. <u>Methane:</u> Adverse effects not expected from this product. <u>Oxygen:</u> Adverse effects not expected from this product. <u>Nitrogen:</u>
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Methods and material for containment and cleaning up:

Provide adequate ventilation. Eliminate sources of ignition.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Carbon monoxide+Methane: Dry chemical, Water spray or fog, Foam.
Oxygen: Water.
Nitrogen: Material will not burn. In case of fire in the surroundings: use appropriate extinguishing agent.

Unsuitable extinguishing media: Carbon monoxide+Methane: Carbon dioxide.
Oxygen: None.
Nitrogen: None.

Specific Hazards: Carbon monoxide: None
Methane: Incomplete combustion may form carbon monoxide.
Oxygen: Supports combustion.
Nitrogen: None.

Special fire fighting procedures:
- In case of fire: Stop leak if safe to do so.
- Do not extinguish flames at leak because possibility of uncontrolled explosive re-ignition exists. Continue water spray from protected position until container stays cool. Use extinguishants to contain the fire. Isolate the source of the fire or let it burn out.

Special protective equipment for firefighters: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, self-contained breathing apparatus.

7. HANDLING AND STORAGE

Safe Handling:

- Only experienced and properly instructed persons should handle gases under pressure.
- Keep away from oil, grease heat, hot surfaces, sparks, open flames and other ignition sources.
- No smoking.
- Never use direct flame or electrical heating devices to raise the pressure of a container.
- Use only non-sparking tools. Use only explosion-proof equipment.
- Use only with equipment cleaned for oxygen service and rated for the pressure.
- Wear leather safety gloves and safety shoes when handling cylinders.
- Protect cylinders from physical damage; do not drag, roll, slide or drop. While moving cylinder, always keep in place removable valve cover. Never attempt to lift a cylinder by its cap; the cap is intended solely to protect the valve. When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders.
- Never insert an object (e.g., wrench, screwdriver, pry bar) into cap openings; doing so may damage the valve and cause a leak.
- Use an adjustable strap wrench to remove over-tight or rusted caps. Slowly open the valve. If the valve is hard to open, discontinue use and contact your supplier.
- Close the container valve after each use; keep closed even when empty.
- Secure cylinders in an upright position at all times, close all valves when not in use.
- Leave valve protection caps in place until the container has been secured against either a wall or bench or placed in a container stand and is ready for use.
- Never apply flame or localized heat directly to any part of the container. High temperatures may damage the container and could cause the pressure relief device to fail prematurely, venting the container contents.
- Use only oxygen approved lubricants and sealants.
- Keep container valve outlets clean and free from contaminates particularly oil and water.
- Do not remove or deface labels provided by the supplier for the identification of the

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

- Evacuate area.
- Provide adequate ventilation.
- Consider the risk of potentially explosive atmospheres. In case of leakage, eliminate all ignition sources.
- Monitor the concentration of the released product. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.
- Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.
- Respiratory protective devices - Self-contained open circuit compressed air breathing apparatus with full face mask - Requirements, testing, marking.

Environmental Precautions:

- Prevent further leakage or spillage if safe to do so.
- Prevent waste from contaminating the surrounding environment.
- Prevent soil and water pollution.
- Dispose of contents/container in accordance with local/regional/national/international regulations.
- Contact supplier for any special requirements.

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Conditions for safe storage, including any incompatibilities:

- container contents.
- Damaged valves should be reported immediately to the supplier.
- Never attempt to repair or modify container valves or safety relief devices.
- For other precautions in using this product, see "Other Information" below.
- All electrical equipment in the storage areas should be compatible with the risk of a potentially explosive atmosphere.
- Segregate from flammable gases, oxidant gases and other oxidants being stored.
- Containers should not be stored in conditions likely to encourage corrosion. Stored containers should be periodically checked for general conditions and leakage.
- Container valve guards or caps should be in place.
- Store containers in location free from fire risk and away from sources of heat and ignition.
- Avoid asphalted locations for storage, transfer and use (ignition risk if spilt).
- Keep away from combustible material.

emergency use.

- Personal protective equipment for the body should be selected based on the task being performed and the risks involved. Protect eyes, face and skin from contact with product. Refer to local regulations for restriction of emissions to the atmosphere.
- See section 13 for specific methods for waste gas treatment.

Eyes: Wear safety glasses when handling cylinders; vapor-proof goggles and a face shield during cylinder changeout or whenever contact with product is possible.

Hands: Wear working gloves when handling gas containers.

Body protection: Wear metatarsal shoes and work gloves for cylinder handling, and protective clothing where needed. Wear appropriate chemical gloves during cylinder changeout or wherever contact with product is possible.

Feet: Wear safety shoes while handling containers.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Occupational Exposure Hazards (HCS): Prolonged exposure to low concentrations of carbon monoxide may cause permanent harmful effects.

Engineering Control Measures:

- Consider a work permit system e.g., for maintenance activities.
- Ensure adequate air ventilation. Provide adequate general and local exhaust ventilation.
- Keep concentrations well below lower explosion limits. Gas detectors should be used when quantities of oxidizing gases, flammable gases or vapours may be released.
- Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.
- Systems under pressure should be regularly checked for leakages.
- Product to be handled in a closed system. Use only permanent leak tight installations (e.g., welded pipes).
- Take precautionary measures against static discharges.

Personal protection:

- A risk assessment should be conducted and documented in each work area to assess the risks related to the use of the product and to select the PPE that matches the relevant risk.
- Keep self-contained breathing apparatus readily available for emergency use.
- Keep suitable chemically resistant protective clothing readily available for

9. PHYSICAL AND CHEMICAL PROPERTIES

Chemical Name:	Carbon Monoxide
Chemical Symbol:	CO
Appearance Physical state:	Gas
Form:	Compressed gas
Colour:	Colourless
Odour:	Odourless
Odour Threshold:	Odour threshold is subjective and is inadequate to warn of over exposure.
pH:	Not applicable
Melting Point:	-205 °C
Boiling Point:	-191.5 °C
Sublimation Point:	Not applicable
Critical Temp. (°C):	-140.0 °C
Flash Point:	Not applicable.
Evaporation Rate:	Not applicable.
Flammability (solid, gas):	Flammable gas.
Flammability limit - upper (%):	74% (V)
Flammability limit - lower (%):	10.9% (V)
Vapour pressure:	> 101.325 kPa (20 °C)
Vapour density (air=1):	0.968 Air=1
Relative density:	0.97 (20 °C)

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Solubility in Water: 29 g/l (20 °C)
Partition coefficient (n-octanol/water): 1.78
Autoignition Temperature: 605 °C
Decomposition Temperature: 400 °C
Viscosity
Kinematic viscosity: Not applicable.
Dynamic viscosity: Not applicable.
Explosive properties: Not applicable.
Oxidising Properties: None.

Chemical Name: **Methane**
Chemical Symbol: CH₄
Appearance
Physical state: Gas
Form: Compressed gas
Colour: Colourless
Odour: Odourless
Odour Threshold: Odour threshold is subjective and is inadequate to warn of over exposure.
pH: Not applicable.
Melting Point: -182.47 °C
Boiling Point: -161.48 °C
Sublimation Point: Not applicable.
Critical Temp. (°C): -82.0 °C
Flash Point: Not applicable.
Evaporation Rate: Not applicable.
Flammability (solid, gas): Flammable gas.
Flammability limit - upper (%): 17 %(V)
Flammability limit – lower (%): 4.4 %(V)
Vapour pressure: Not applicable.
Vapour density (air=1): 0.6
Relative density: 0.42 (25 °C)
Solubility in Water: 22 mg/l (25 °C)
Partition coefficient (n-octanol/water): 1.09
Autoignition Temperature: 537 °C

Decomposition Temperature: Not applicable.
Viscosity
Kinematic viscosity: Not applicable.
Dynamic viscosity: Not applicable.
Explosive properties: Not applicable.
Oxidising Properties: None.

Chemical Name: **Oxygen**
Chemical Symbol: O₂
Appearance
Physical state: Gas
Form: Compressed gas
Colour: Colourless
Odour: Odourless
Odour Threshold: Odour threshold is subjective and is inadequate to warn of over exposure.
pH: Not applicable.
Melting Point: -218.4 °C
Boiling Point: -183 °C
Sublimation Point: Not applicable.
Critical Temp. (°C): -118.0 °C
Flash Point: Not applicable.
Evaporation Rate: Not applicable.
Flammability (solid, gas): This product is not flammable.
Flammability limit - upper (%): Not applicable.
Flammability limit – lower (%): Not applicable.
Vapour pressure: 4,053 kPa (-124.1 °C)
Vapour density (air=1): 1.1 (0 °C) Air=1
Relative density: 1.1 (0 °C, Reference material: Water)
Solubility in Water: 39 mg/l
Partition coefficient (n-octanol/water): Not known.
Autoignition Temperature: Not applicable.
Decomposition Temperature: Not known.
Viscosity
Kinematic viscosity: Not applicable.
Dynamic viscosity: Not applicable.
Explosive properties: Not applicable.

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Oxidising Properties:	Oxidising.
Chemical Name:	<u>Nitrogen</u>
Chemical Symbol:	N ₂
Appearance	
Physical state:	Gas
Form:	Compressed gas
Colour:	Colourless
Odour:	Odourless
Odour Threshold:	Odour threshold is subjective and is inadequate to warn of over exposure.
pH:	Not applicable.
Melting Point:	-210.01 °C
Boiling Point:	-196 °C
Sublimation Point:	Not applicable.
Critical Temp. (°C):	-147.0 °C
Flash Point:	Not applicable.
Evaporation Rate:	Not applicable.
Flammability (solid, gas):	This product is not flammable.
Flammability limit - upper (%):	Not applicable.
Flammability limit - lower (%):	Not applicable.
Vapour pressure:	Not applicable.
Vapour density (air=1):	0.97
Relative density:	0.8
Solubility in Water:	20 mg/l
Partition coefficient (n-octanol/water):	0.67
Autoignition Temperature:	Not applicable.
Decomposition Temperature:	Not known.
Viscosity	
Kinematic viscosity:	Not applicable.
Dynamic viscosity:	0.171 mPa.s (10.9 °C)
Explosive properties:	Not applicable.
Oxidising Properties:	Not applicable.

Chemical stability:	Stable under normal conditions.
Possibility of hazardous reactions:	<u>Carbon monoxide:</u> - Can form a potentially explosive atmosphere in air. May react violently with oxidants. <u>Methane:</u> - Stable under normal conditions. <u>Oxygen:</u> - Violently oxidises organic material. May react violently with combustible materials. May react violently with reducing agents. <u>Nitrogen:</u> None.
Conditions to avoid:	- Avoid moisture in the installation. - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources - No smoking.
Incompatible Materials:	- Air and oxidisers. - Moisture. - Combustible materials. - Reducing Agents. - Keep equipment free from oil and grease.
Hazardous Decomposition of Products:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. TOXOLOGICAL INFORMATION

Acute Toxicity:	Not classified
Skin & eye contact:	Not classified
Chronic Toxicity:	Not classified
Carcinogenicity:	Not classified
Mutagenicity:	Not classified
Reproductive Hazards:	Not classified

12. ECOLOGICAL INFORMATION

Toxicity:	No ecological damage caused by this product.
Persistence and degradability:	Not readily biodegradable. Not applicable for inorganic gases.
Mobility in soil:	No data available.
Ecology - soil:	Because of its high volatility, the product is unlikely to cause ground or water pollution. Not classified as PBT or vPvB.
Results of PBT and vPvB assessment:	
Other adverse effects:	No ecological damage caused by this product.
Effect on ozone layer:	None.
Effect on the global warming:	<u>Carbon monoxide:</u> 1.9 [CO ₂ =1] <u>Methane:</u>

10. STABILITY AND REACTIVITY

Reactivity:	No reactivity hazard other than the effects described in sub-section below.
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Global warming potential: 25 [CO₂=1]
Contains greenhouse gas(es). When discharged in large quantities may contribute to the greenhouse effect.
Oxygen:
No known effects from this product.
Nitrogen:
None.

ERG No.: Carbon monoxide: 119
Methane: 115
Oxygen: 122
Nitrogen: 121
Class: Carbon monoxide: 2.1
Methane: 2.1
Oxygen: 2.2
Nitrogen: 2.2
Subsidiary Risk: Carbon monoxide: Toxic gas
Methane: Flammable gas
Oxygen: Non-flammable gas
Nitrogen: Non-flammable gas
Label: Carbon monoxide: Toxic gas
Methane: Flammable gas
Oxygen: Non-flammable gas
Nitrogen: Non-flammable gas

13. DISPOSAL CONSIDERATIONS

Disposal Methods: - Dispose of container via supplier only.
- For more detailed information or guidance contact the nearest Afrox branch.
Disposal of Packaging: The container is the property of the supplier and the disposal of the containers must only be handled by the supplier.

Air Transportation

ICAO/IATA Code: Carbon monoxide: 1016
Methane: 1971
Oxygen: 1072
Nitrogen: 1066
Class: Carbon monoxide: 2.1
Methane: 2.1
Oxygen: 2.2
Nitrogen: 2.2
Subsidiary risk: Carbon monoxide: Toxic gas
Methane: Flammable gas
Oxygen: Non-flammable gas
Nitrogen: Non-flammable gas
Packaging instructions:
- Cargo: Forbidden
- Passenger: Forbidden
Methane:
- Cargo: Forbidden
- Cargo aircraft only: Allowed (200)
- Passenger: Forbidden
Oxygen:
- Cargo: Allowed (200)
- Cargo aircraft only: Allowed
- Passenger: Allowed (200)
Nitrogen:
- Cargo: Allowed (200)
- Passenger: Allowed (200)
Maximum quantity allowed: Carbon monoxide:
- Cargo: Forbidden
- Passenger: Forbidden
Methane:
- Cargo: 150 kg
- Passenger: Forbidden
Oxygen:
- Cargo: 100 kg
- Passenger: 75 kg
Nitrogen:
- Cargo: 150 kg
- Passenger: 75 kg

14. TRANSPORT INFORMATION

Road Transportation

UN No.: Carbon monoxide: 1016
Methane: 1971
Oxygen: 1072
Nitrogen: 1066
Shipping Name: Carbon monoxide: Compressed gas
Methane: Compressed gas
Oxygen: Compressed gas
Nitrogen: Compressed gas
ERG No.: Carbon monoxide: 119
Methane: 115
Oxygen: 122
Nitrogen: 121
Class: Carbon monoxide: 2.3
Methane: 2.1
Oxygen: 2.2
Nitrogen: 2.2
Subsidiary Risk: Carbon monoxide: Poison gas
Methane: Flammable gas
Oxygen: Non-flammable gas
Nitrogen: Non-flammable gas
Hazchem Warning: Carbon monoxide:
- Flammable gas
- Poison gas
Methane:
- Flammable gas
Oxygen:
- Oxidizing gas
Nitrogen:
- Non-flammable gas

Sea Transportation

IMDG: Carbon monoxide: 1016
Methane: 1971
Oxygen: 1072
Nitrogen: 1066
Shipping Name: Carbon monoxide: Compressed gas
Methane: Compressed gas
Oxygen: Compressed gas
Nitrogen: Compressed gas

15. REGULATORY INFORMATION

OHSAct 85 of 1993 and Regulations.
SANS 10265
SANS 10234
SANS 10234 – Supplement
ISO 11014

**SAFETY DATA SHEET (SDS)
CO-METHCAL GAS STANDARDS**

Please ensure that this SDS is received by the appropriate persons

Review Date: 11/11/2021 v01

Emergency: 0860 02 02 02

Document Number: AFX-SDS-0039

16. OTHER INFORMATION

- Ensure all national/local regulations are observed.
- Ensure users and relevant persons understand the asphyxiation hazard.
- Regularly check suppliers information sources for updated versions of SDS's.

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BIBLIOGRAPHY

Compressed Gas Association, Arlington, Virginia
Handbook of Compressed Gases - 3rd Edition
Matheson. Matheson Gas Data Book - 6th Edition
SABS 0625 - Labelling of Dangerous Substances

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