

MATERIAL SAFETY DATA SHEET



MFR /SUPPLIER: TAKORADI GS LTD, E56, EFFIA INDUSTRIAL AREA, TAKORADI, GHANA
CONTACT: 0540 111 898 EMERGENCY: 0244 330 394 /0244 354 394

Product: CO2 in Argon (Mixed Gas)

Dated: 26 June 2020

1 IDENTIFICATION OF THE SUBSTANCE PREPARATION AND OF THE COMPANY

Product Name Carbon Dioxide in Argon Mixture
Use Industrial
Company Identification See heading and/or footer
Emergency phone numbers See heading and/or footer

2 HAZARDS IDENTIFICATION

Hazards Identification

Asphyxiant gas under high pressure.
Skin – high pressure release may cause injury.
Eyes – high pressure release may cause injury.
Inhalation – asphyxiant at high concentrations – may lead to loss of consciousness and death. The gas has no appreciable warning odour.

3 COMPOSITION/INFORMATION INGREDIENTS

Substance / Preparation Preparation

<u>Chemical Name</u>	<u>Mole %</u>	<u>CAS No</u>	<u>EC No</u>
Carbon Dioxide	0 – 50%	124-38-9	204-696-9
Argon	Balance	7440-37-1	231-147-0

Generic MSDS for all mixtures in this range

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. 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.

Ingestion Ingestion is not considered a potential route of exposure.

5 FIRE FIGHTING MEASURES

Specific hazards Ensure that the emergency services are aware of the presence of gas cylinders on the premises.

Hazardous combustion products None

Suitable extinguishing media All known extinguishants can be used.

Specific Methods If there is no risk, close valve and remove cylinder from affected area. The cylinder may detonate if heated. Water spray may be used from a protected position to keep cylinders cool.

Special protective equipment for fire fighters In confined spaces use breathing apparatus.

6 ACCIDENTAL RELEASE MEASURES

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

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 Suck back of water into the container must be prevented.
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. Refer to supplier's container handling instructions.
Keep container below 50°

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limit values Carbon dioxide –
LTEL: 5000ppm; STEL: 15000ppm (EH40/2000)
In a confined space, displacement of air may cause the exposure limits to be exceeded before the oxygen level drops below 18%.

Personal protection Ensure adequate ventilation.

9 PHYSICAL AND CHEMICAL PROPERTIES

Relative density Heavier to air
Solubility mg/l water Not known
Appearance/Colour Colourless Gas
Odour No odour warning properties
Oxidising properties None
Flammability None
Molecular weight 83.96
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.

10 STABILITY AND REACTIVITY

The mixture is chemically stable under normal conditions and is not believed to pose any special hazard in normal use.
Compatible materials (dry gas: Y = preferred, 0 = limited suitability, X = not suitable)

S/Steel	Y
Other Steels	Y
Copper	Y
Brass	Y
Aluminium	Y
Rubber	0
PTFE	Y

Before using this mixture in any new process, carry out a full compatibility study.

EMERGENCY CONTACT INFORMATION

HEAD OFFICE- TAKORADI 0244 330 594 / 0244 354 394
KUMASI DEPOT- 0540 111 885
KENYASI - 0245 704 942
AKYEM -0544 311 187
Email: tg1@tg1gh.com

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11 TOXICOLOGICAL INFORMATION

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

12 ECOLOGICAL INFORMATION

Carbon dioxide – When discharged in large quantities may contribute to the greenhouse effect.

13 DISPOSAL CONSIDERATIONS

Discharge to atmosphere in large quantities should be avoided.
Do not discharge into any place where its accumulation could be dangerous.
Contact supplier if guidance is required.

14 TRANSPORT INFORMATION UN Number 1956

Class/Div	2.2
Proper Shipping Name	Compressed Gas, N.O.S
Packing group	Not applicable
Marine pollutant	No
EMS Code	F-C, S-
Classification code	1A
ADR/RID Hazard Nr	20
Labelling ADR	Label 2: non-flammable, non-toxic gas.
Other transport information	Refer to the section "Handling and Storage" (above). Ensure that the driver has a copy of this document and is aware of the hazards. Secure cylinders properly. Ensure that they do not project beyond the sides or end of the vehicle. Regulators and other fittings should be disconnected. In case of accident or emergency, advise the emergency services of the presence of cylinders. Do not store cylinders in vehicles – remove them once the destination is reached. Fire fighting equipment should be carried. Use vehicles where the load is segregated from the driver's compartment. Extra regulations apply to vehicles carrying large quantities of dangerous substances. Contact DGL for information concerning these, or for other transportation information.

15 REGULATORY INFORMATION

Number in Annex 1 of Dir 67/548	Not applicable for preparations
EC Classification	Not classified as dangerous preparation.
Labelling of cylinders - Symbols	Label 2: non flammable non toxic gas.

16 OTHER INFORMATION

At higher concentrations carbon dioxide will limit the pressure of the mixture. All DGL gas mixtures are prepared and described in molar volume terms. Contact us for conversion factors to other units.
Do not use a mixture whose pressure has fallen below 7 bar (100psig) – consistency cannot be assured.
Note that mixtures are normally only guaranteed against condensation of components to 0°C.
Ensure those using this product are suitably trained and deemed competent. Ensure all national/local regulations are observed
The hazard of asphyxiation is often overlooked and must be stressed during operator training. Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out. Details given in this document, in accordance with the requirements of Annex II of L136/84 Official Journal of the European Union, 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.

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