Propane < 1.2% in Balance Air Gas

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision Date: 04/04/2014 Date of issue: 04/04/2014 Version: 1.0

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

Product Identifier

Product Form: Mixture

Product Name: Propane < 1.2% in Balance Air Gas

SDS No: 50042

Intended Use of the Product

Calibration of Monitoring or Research Equipment

Name, Address, and Telephone of the Responsible Party

Company

Calgaz, division of Air Liquide aB&T
2700 Post Oak Blvd.
Houston, TX 77056
USA
(713) 896-2896
sds@airliquide.com
www.us.airliquide.com

Supplier: Industrial Scientific
1 Life Way
Pittsburgh, PA 15205-7500
TOLL-FREE 800-DETECTS
Fax (412) 788-8353

Emergency Telephone Number

Emergency number : 800-424-9300 CHEMTREC (in US); +1 703-527-3887 CHEMTREC (International and Maritime)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

Classification (GHS-US)

Compressed gas H280

Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US) :

GHS04

Signal Word (GHS-US) : Warning

Hazard Statements (GHS-US) : H280 - Contains gas under pressure; may explode if heated

Precautionary Statements (GHS-US) : P410+P403 - Protect from sunlight. Store in a well-ventilated place

Other Hazards Not available

Unknown Acute Toxicity (GHS-US) Not available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Name	Product identifier	% (w/w)	Classification (GHS-US)
Air	(CAS No) 132259-10-0	98.8 to 100	Not classified
Propane	(CAS No) 74-98-6	< 0.1, 0.1 to 1 or 0.5 to 1.2	Simple Asphy Flam. Gas 1, H220 Compressed gas, H280

More than one of the ranges of concentration prescribed by Controlled Products Regulations has been used where necessary, due to varying composition. The composition of Air is as follows: 79% Nitrogen and 21% Oxygen.

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible). If frostbite or freezing occurs, immediately flush with plenty of lukewarm water to GENTLY warm the affected area. Do not use hot water. Do not rub affected area. Get immediate medical attention.

Inhalation: If inhaled, remove to fresh air and keep at rest in a position comfortable for breathing. If exposed or concerned: Get medical advice/attention

Skin Contact: Rinse with plenty of water. Obtain medical attention if irritation develops or persists

Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

Ingestion: Ingestion is an unlikely route of exposure for a gas.

Most Important Symptoms and Effects Both Acute and Delayed

General: Compressed gases may create low temperatures when they expand rapidly. Leaks and uses that allow rapid expansion may cause a frostbite hazard.

Inhalation: None expected under normal conditions of use.

Skin Contact: None expected under normal conditions of use.

Eye Contact: None expected under normal conditions of use.

Ingestion: None expected under normal conditions of use.

Chronic Symptoms: None expected under normal conditions of use.

Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

SECTION 5: FIREFIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire. In case of fire: keep cylinder cool by spraying with water.

Unsuitable Extinguishing Media: Use of heavy stream of water may spread fire.

Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not flammable. Contains gas under pressure; may explode if heated.

Explosion Hazard: Cool closed containers exposed to fire with water spray. Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

Reactivity:. Contains < 1.2% Propane, a flammable gas and simple asphyxiant.

Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire. Do not breathe gas.

Firefighting Instructions: Stop leak if safe to do so. Use water spray or fog for cooling exposed containers. Remove containers from fire area if this can be done without risk. Fight fire from safe distance and protected location.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.

Hazardous Combustion Products: Nitrogen compounds. Carbon oxides (CO, CO_2). Hydrocarbons. Smoke.

Reference to Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Do not breathe gas. Avoid contact with the skin and the eyes. Keep away from heat, sparks, open flames, hot surfaces. No smoking.

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel. Keep upwind.

For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Stop leak if safe to do so. Eliminate ignition sources. Ventilate area.

Environmental Precautions

Avoid release to the environment.

Methods and Material for Containment and Cleaning Up

For Containment: Stop leak if safe to do so.

Methods for Cleaning Up: Stop the source of the release, if safe to do so. Consider the use of water spray to disperse vapors. Isolate the area until gas has dispersed. Ventilate and gas test area before entering. Contact competent authorities after a spill.

Reference to Other Sections

See heading 8, Exposure Controls and Personal Protection.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Additional Hazards When Processed: Risk of explosion if heated under confinement. Keep away from heat, sparks, open flames, hot surfaces. No smoking. Ruptured cylinders may rocket. Do not pressurize, cut, or weld containers.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Use only outdoors or in a well-ventilated area. Do no eat, drink or smoke when using this product.

Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations. Cylinders should be stored upright with valve protection cap in place and firmly secured to prevent falling. Keep at temperatures below 52°C / 125°F.

Storage Conditions: Store tightly closed in a dry, cool and well-ventilated place. Keep/Store away from combustible and reducing. Keep away from heat, sparks, open flames, hot surfaces. No smoking. Keep reduction valves free from grease and oil.

Specific End Use(s)

Calibration of Monitoring or Research Equipment.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Propane (74-98-6)		
USA ACGIH	ACGIH TWA (ppm)	1000 ppm
USA OSHA	OSHA PEL (TWA) (mg/m³)	1800 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	1000 ppm
USA NIOSH	NIOSH REL (TWA) (mg/m³)	1800 mg/m³
USA NIOSH	NIOSH REL (TWA) (ppm)	1000 ppm
USA IDLH	US IDLH (ppm)	2100 ppm (10% LEL)
Alberta	OEL TWA (ppm)	1000 ppm
British Columbia	OEL TWA (ppm)	1000 ppm
Manitoba	OEL TWA (ppm)	1000 ppm
Newfoundland & Labrador	OEL TWA (ppm)	1000 ppm
Nova Scotia	OEL TWA (ppm)	1000 ppm
Ontario	OEL TWA (ppm)	1000 ppm
Prince Edward Island	OEL TWA (ppm)	1000 ppm
Québec	VEMP (mg/m³)	1800 mg/m³
Québec	VEMP (ppm)	1000 ppm
Saskatchewan	OEL STEL (ppm)	1250 ppm
Saskatchewan	OEL TWA (ppm)	1000 ppm

Exposure Controls

Appropriate Engineering Controls: Ensure adequate ventilation, especially in confined areas**.** Oxygen detectors should be used when asphixiating gases may be released. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure all national/local regulations are observed.

Personal Protective Equipment: Protective goggles. Gloves. Protective clothing. Self-contained breathing apparatus.

Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Protective gloves.

Eye Protection: Chemical goggles or safety glasses.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: Use a NIOSH-approved self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

Thermal Hazard Protection: If material is cold, wear thermally resistant protective gloves.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	:	Gas
Appearance	:	Colorless
Odor	:	Odorless
Odor Threshold	:	Not available
pH	:	Not available
Relative Evaporation Rate (butylacetate=1)	:	Not available
Melting Point	:	Not available
Freezing Point	:	Not available
Boiling Point	:	Not available
Flash Point	:	Not available
Auto-ignition Temperature	:	Not available
Decomposition Temperature	:	Not available
Flammability (solid, gas)	:	Not available
Lower Flammable Limit	:	Not available
Upper Flammable Limit	:	Not available
Vapor Pressure	:	Not available
Relative Vapor Density at 20 °C	:	Not available
Relative Density	:	Not available
Specific Gravity	:	Not available
Solubility	:	Not available
Log Pow	:	Not available
Log Kow	:	Not available
Viscosity, Kinematic	:	Not available
Viscosity, Dynamic	:	Not available
Explosion Data – Sensitivity to Mechanical Impact	:	Not available
Explosion Data – Sensitivity to Static Discharge	:	Not available

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Contains gas under pressure; may explode if heated. Contains < 1.2% Propane, a flammable gas and simple asphyxiant.

Chemical Stability: Stable under recommended handling and storage conditions (see section 7).

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Incompatible materials. Sparks, heat, open flame and other sources of ignition.

Incompatible Materials: Strong oxidizers. Combustible materials. Can react violently with lithium, neodymium, titanium under the proper conditions.

Hazardous Decomposition Products: Nitrogen compounds. Carbon oxides (CO, CO_2). Hydrocarbons. Smoke.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

Acute Toxicity: Not classified

LD50 and LC50 Data: Not available

Skin Corrosion/Irritation: Not classified

Serious Eye Damage/Irritation: Not classified

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Teratogenicity: Not available

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified
Reproductive Toxicity: Not classified
Specific Target Organ Toxicity (Single Exposure): Not classified
Aspiration Hazard: Not classified
Symptoms/Injuries After Inhalation: None expected under normal conditions of use. Contains < 1.2% Propane, a flammable gas and simple asphyxiant.
Symptoms/Injuries After Skin Contact: None expected under normal conditions of use.
Symptoms/Injuries After Eye Contact: None expected under normal conditions of use.
Symptoms/Injuries After Ingestion: None expected under normal conditions of use.
Information on Toxicological Effects - Ingredient(s)
LD50 and LC50 Data:

Propane (74-98-6)	
LC50 Inhalation Rat (mg/l)	658 mg/l/4h

SECTION 12: ECOLOGICAL INFORMATION

Toxicity Not classified
Persistence and Degradability Not available
Bioaccumulative Potential

Propane (74-98-6)	
Log Pow	2.3

Mobility in Soil Not available
Other Adverse Effects Not available

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.
Additional Information: Recycle the material as far as possible. Cylinders with undesired residual product may be safely vented outdoors with the proper regulator. For further information refer to section 16.

SECTION 14: TRANSPORT INFORMATION

14.1 In Accordance with DOT
Proper Shipping Name : COMPRESSED GAS, N.O.S. (Air, Propane)
Hazard Class : 2.2
Identification Number : UN1956
Label Codes : 2.2
ERG Number : 115

14.2 In Accordance with IMDG
Proper Shipping Name : COMPRESSED GAS, N.O.S. (Air, Propane)
Hazard Class : 2.2
Identification Number : UN1956
Label Codes : 2.2
EmS-No. (Fire) : F-C
EmS-No. (Spillage) S-V

14.3 In Accordance with IATA
Proper Shipping Name : COMPRESSED GAS, N.O.S. (Air, Propane)
Identification Number : UN1956
Hazard Class : 2
Label Codes : 2.2
ERG Code (IATA) : 2L

14.4 In Accordance with TDG

Proper Shipping Name : COMPRESSED GAS, N.O.S. (Air, Propane)

Hazard Class : 2.2

Identification Number : UN1956

Label Codes : 2.2

SECTION 15: REGULATORY INFORMATION

US Federal Regulations

Propane < 1.2% in Balance Air Gas	
SARA Section 311/312 Hazard Classes	Sudden release of pressure hazard

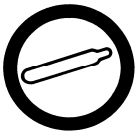
Propane (74-98-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

US State Regulations

Propane (74-98-6)
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min)
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (8 hr)
U.S. - Delaware - Accidental Release Prevention Regulations - Sufficient Quantities
U.S. - Delaware - Accidental Release Prevention Regulations - Threshold Quantities
U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities
U.S. - Idaho - Occupational Exposure Limits - TWAs
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 1
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 2
U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2
U.S. - Massachusetts - Right To Know List
U.S. - Michigan - Occupational Exposure Limits - TWAs
U.S. - Minnesota - Hazardous Substance List
U.S. - Minnesota - Permissible Exposure Limits - TWAs
U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances
U.S. - New Jersey - Environmental Hazardous Substances List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - New Jersey - Special Health Hazards Substances List
U.S. - New Jersey - TCPA - Extraordinarily Hazardous Substances (EHS)
U.S. - New York - Occupational Exposure Limits - TWAs
U.S. - Ohio - Accidental Release Prevention - Threshold Quantities
U.S. - Oregon - Permissible Exposure Limits - TWAs
U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - Tennessee - Occupational Exposure Limits - TWAs
U.S. - Texas - Effects Screening Levels - Long Term
U.S. - Texas - Effects Screening Levels - Short Term
U.S. - Vermont - Permissible Exposure Limits - TWAs
U.S. - Washington - Permissible Exposure Limits - STELs
U.S. - Washington - Permissible Exposure Limits - TWAs

Canadian Regulations

Propane < 1.2% in Balance Air Gas	
WHMIS Classification	Class A - Compressed Gas



Air (132259-10-0)	
WHMIS Classification	Class A - Compressed Gas

Propane (74-98-6)	
Listed on the Canadian DSL (Domestic Substances List) inventory.	
WHMIS Classification	Class A - Compressed Gas Class B Division 1 - Flammable Gas

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by CPR.

SECTION 16: OTHER INFORMATION

Revision date : 04/04/2014

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

Compressed gas	Gases under pressure Compressed gas
Flam. Gas 1	Flammable gases Category 1
Simple Asphy	Simple Asphyxiant
H220	Extremely flammable gas
H280	Contains gas under pressure; may explode if heated

Party Responsible for the Preparation of This Document

Calgaz, division of Air Liquide aB&T

Phone Number: 713-896-2896

This Material Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR, 1910.1200. Other government regulations must be reviewed for applicability to this gas mixture. To the best of CALGAZ knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are not guaranteed and no warranties of any type, either express or implied, are provided. The information contained herein relates only to this specific product. If this gas mixture is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.

North America GHS US 2012 & WHMIS

Replaces ISC MSDS No. 1810-0164, 1810-0172, 1810-4216Q, 1810-8711