

0.0001% to 1.1% Propane in Air

1 PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: 0.0001% to 1.1% Propane in Air
 Common Name: Propane in Air
 SDS Number: NLB 2170
 Revision Date: 6/1/2018
 Version: 2
 CAS Number: Not Available - Gas Mixture
 EPA Number: Not Available
 RCRA Number: Not Applicable
 Chemical Family: Gas Mixture
 Chemical Formula: C₃H₈ + O₂ + N₂
 Product Use: Calibration of analytical instrumentation

Supplier Details: NorLab a division of Norco
 898 W. Gowen Rd.
 Boise, ID 83705

Contact: Quality Dept.
 Phone: 208-336-1643
 Fax: 208-433-6160
 Internet: www.norlab-gas.com

2 HAZARDS IDENTIFICATION

Classification of Substance

GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS):
 Physical, Gases Under Pressure, Compressed Gas

GHS Label Elements, Including Precautionary Statements

GHS Signal Word: **WARNING**

GHS Hazard Pictograms:



GHS Hazard Statements:

H280 - Contains gas under pressure; may explode if heated
 CGA-HG24 - SUPPORTS COMBUSTION.

GHS Precautionary Statements:

P202 - Do not handle until all safety precautions have been read and understood.
 P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
 P281 - Use personal protective equipment as required.
 P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P271 - Use only outdoors or in a well-ventilated area.
 P410 + P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
 CGA-PG05 - Use a back flow preventive device in the piping.
 CGA-PG06 - Close valve after each use and when empty.
 CGA-PG10 - Use only with equipment rated for cylinder pressure.

Hazards not Otherwise Classified (HNOC) or not Covered by GHS

Route of Entry: Inhalation; Eyes; Skin;
 Target Organs: Central nervous system; Eyes; Respiratory system; Skin;
 Inhalation: Inhalation of high concentrations of Propane vapors may have a narcotic effect. Symptoms may include dizziness, headache and nausea.

Gas mixture contains sufficient oxygen to support life.
 Skin Contact: May cause minor irritation. Contact with rapidly expanding gas near the point of release may cause

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Eye Contact: frostbite with redness, skin color change to gray or white, and blistering. May cause irritation. Contact with rapidly expanding gas near the point of release may cause frostbite.

Ingestion: Not anticipated. Product is a gas at normal conditions.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Ingredients		
CAS#	%	Chemical Name
74-98-6	0.0001 - 1.1%	Propane
7782-44-7	20.9%	Oxygen
7727-37-9	78.0 - 79.0999%	Nitrogen

20.9% Oxygen in Nitrogen Indicates an Air Balance.

4 FIRST AID MEASURES

Inhalation: PROMPT MEDICAL ATTENTION IS MANDATORY IN ALL CASES OF OVEREXPOSURE TO PRODUCT. RESCUE PERSONNEL SHOULD BE EQUIPED 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 moved to an uncontaminated area, given assisted (artificial) respiration and supplemental oxygen. Further treatment should be symptomatic and supportive.

Skin Contact: Flush affected area with large quantities of water. If irritation persists or frostbite is suspected, seek medical attention.

Eye Contact: Immediately flush eyes with large amounts of water for at least 15 minutes, lifting eyelids occasionally to facilitate irrigation. If frostbite is suspected, flush eyes with cool water for 15 minutes and obtain immediate medical attention.

Ingestion: Not a direct hazard.

5 FIRE FIGHTING MEASURES

Flammability: Not Flammable

Flash Point: None

Flash Point Method: Not Applicable

Burning Rate: Not Applicable

Autoignition Temperature: None

Lower Explosive Limit: None

Upper Explosive Limit: None

Fire and Explosion Hazards:
Nonflammable. contains iso pentane in concentrations below the LEL of 1.5%. Cylinders may rupture violently or vent rapidly from pressure when involved in a fire situation.

Extinguishing Media:
None required. Use as appropriate for surrounding materials

Fire Fighting Instructions:
Firefighters should wear respiratory protection (SCBA) and full turnout or Bunker gear. Continue to cool fire-exposed cylinders until well after flames are extinguished.

0.0001% to 1.1% Propane in Air**6****ACCIDENTAL RELEASE MEASURES**

Stop the flow of gas or remove cylinder to outdoor location if this can be done without risk. Evacuate all personnel from affected area. Ventilate enclosed areas. Use appropriate protective equipment. If leak is in user's equipment, be certain to purge piping with inert gas prior to attempting repairs. If leak is in container or valve, contact the appropriate emergency telephone number listed in section 1 or call your closest Norco/NorLab location.

7**HANDLING AND STORAGE****Handling Precautions:**

Use only in well-ventilated areas. Valve protection caps must remain in place unless the cylinder is secured with valve outlet piped to use point. Do not drag, slide or roll cylinders. Use a suitable hand truck for cylinder movement. Use a pressure regulator when connecting cylinder to lower pressure (<3000 PSIG) piping or systems. Do not heat cylinder by any means to increase the discharge rate of product from the cylinder. Use a check valve or trap in the discharge line to prevent hazardous backflow into the cylinder.

For additional recommendations, consult Compressed Gas Association Pamphlets P-1.

Never carry a compressed gas cylinder or a container of a gas in cryogenic liquid from in an enclosed space such as a car trunk, van or station wagon.

Storage Requirements:

Protect cylinders from physical damage. Store in cool, dry, well-ventilated area away from heavy traffic areas and emergency exits. Do not allow the temperature where cylinders are stored to exceed 125 degrees F (52 degrees C). Cylinders should be stored upright and firmly secured to prevent falling or being knocked over. Full and empty cylinders should be segregated. Use a "first in-first out" inventory system to prevent full cylinders from being stored for excessive periods of time.

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EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:	Use local exhaust in combination with general ventilation as necessary to prevent accumulation of high concentrations and maintain air oxygen levels at or above 19.5%.
Personal Protective Equipment:	<p>Propane cas#:(74-98-6) [0.0001-1.1%] Oxygen cas#:(7782-44-7) [20.9%] Nitrogen cas#:(7727-37-9) [78.0-79.0999%]</p> <p>Personal protective equipment</p> <p>Eye/face protection: Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).</p> <p>Skin protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching gloves outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.</p> <p>Full contact: Material: Fluorinated rubber Minimum layer thickness: 0.7 mm Break through time: 480 min Material tested: Vitoject (KCL 890 / Aldrich Z677698, Size M)</p> <p>Splash contact: Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 60 min Material tested: Camatril (KCL 730 / Aldrich Z677442, Size M) data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374 If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.</p> <p>Body Protection: impervious clothing, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.</p> <p>Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi- purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).</p> <p>Control of environmental exposure: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.</p>

Propane cas#:(74-98-6) [0.0001-1.1%]

Components with workplace control parameters

TWA 1,000 ppm USA. ACGIH Threshold Limit Values (TLV)
Central Nervous System impairment
Cardiac sensitization

TWA 1,000 ppm USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
1,800 mg/m3
The value in mg/m3 is approximate.

TWA 1,000 ppm USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
1,800 mg/m3

TWA 1,000 ppm USA. NIOSH Recommended Exposure Limits
1,800 mg/m3

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PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Colorless Gas	Odor:	Odorless
Physical State:	Gas	Molecular Formula:	C ₃ H ₈ + O ₂ + N ₂
Odor Threshold:	Not Applicable	Solubility:	Slightly Soluble
Particle Size:	Not Applicable	Softening Point:	Not Applicable
Specific Gravity or Density:	Not Determined		
Viscosity:	Not Applicable		
Flammability:	Not Flammable		

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STABILITY AND REACTIVITY

Chemical Stability:	Stable
Conditions to Avoid:	None known
Materials to Avoid:	Strong Oxidizing Agents.
Hazardous Decomposition:	Combustion will produce carbon dioxide and, possibly toxic chemicals such as carbon monoxide.
Hazardous Polymerization:	Will not occur.

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TOXICOLOGICAL INFORMATION

Propane cas#:(74-98-6) [0.0001-1.1%]

Information on toxicological effects

Acute toxicity: no data available

Inhalation: no data available

Dermal: no data available

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: no data available

Respiratory or skin sensitisation: no data available

Germ cell mutagenicity: no data available

Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Specific target organ toxicity - single exposure: no data available

Specific target organ toxicity - repeated exposure: no data available

Aspiration hazard: no data available

Additional Information:

RTECS: TX2275000

Dizziness, Drowsiness, Unconsciousness

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Oxygen cas#:(7782-44-7) [20.9%]

Information on toxicological effects

Acute toxicity:

Oral LD50 no data available

Inhalation LC50

Dermal LD50

Other information on acute toxicity

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: no data available

Respiratory or skin sensitization: no data available

Germ cell mutagenicity: no data available

Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Teratogenicity: no data available

Specific target organ toxicity - single exposure (Globally Harmonized System):
no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System):
no data available

Aspiration hazard: no data available

Potential health effects: Inhalation May be harmful if inhaled. May cause respiratory tract irritation. Ingestion May be harmful if swallowed. Skin May be harmful if absorbed through skin. May cause skin irritation. Eyes May cause eye irritation.

Signs and Symptoms of Exposure: Nausea, Dizziness, Unconsciousness, May be harmful.

Synergistic effects: no data available

Additional Information:

RTECS: RS2060000

Nitrogen cas#:(7727-37-9) [78.0-79.0999%]

Information on toxicological effects

Acute toxicity:

Oral LD50 no data available

Inhalation LC50

Dermal LD50

Other information on acute toxicity

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: no data available

Respiratory or skin sensitization: no data available

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Germ cell mutagenicity: no data available

Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Teratogenicity: no data available

Specific target organ toxicity - single exposure (Globally Harmonized System):
no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System):
no data available

Aspiration hazard: no data available

Potential health effects: Inhalation May be harmful if inhaled. May cause respiratory tract irritation. Ingestion May be harmful if swallowed. Skin May be harmful if absorbed through skin. May cause skin irritation. Eyes May cause eye irritation.

Signs and Symptoms of Exposure: May be harmful., Nausea, Headache, Vomiting

Synergistic effects: no data available

Additional Information:

RTECS: QW9700000

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Propane cas#:(74-98-6) [0.0001-1.1%]

Information on ecological effects

Toxicity: no data available

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects: no data available

Oxygen cas#:(7782-44-7) [20.9%]

Information on ecological effects

Toxicity: no data available

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: no data available

Nitrogen cas#:(7727-37-9) [78.0-79.0999%]

Information on ecological effects

Toxicity: no data available

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: no data available

13**DISPOSAL CONSIDERATIONS**

Do not attempt to dispose of residual waste or unused quantities in returnable containers. Return in shipping container, properly labeled, with any valve outlet plugs or caps secured and valve protection cap in place to Norco for proper disposal.

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TRANSPORT INFORMATION

UN1956, Compressed gas, n.o.s., 2.2

Proper Shipping Name US:

UN 1956, Compressed Gas N.O.S., (Propane, Air), 2.2

Proper Shipping Name Canada:

UN 1956, Compressed Gas N.O.S., (Propane, Air), 2.2



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REGULATORY INFORMATION

Component (CAS#) [%] - CODES

Propane (74-98-6) [0.0001-1.1%] MASS, NJHS, OSHAWAC, PA, TSCA, TXAIR

Oxygen (7782-44-7) [20.9%] MASS, PA, TSCA

Nitrogen (7727-37-9) [78.0-79.0999%] MASS, PA, TSCA

Regulatory CODE Descriptions

MASS = MA Massachusetts Hazardous Substances List

NJHS = NJ Right-to-Know Hazardous Substances

OSHA = OSHA workplace Air Contaminants

PA = PA Right-To-Know List of Hazardous Substances

TSCA = Toxic Substances Control Act

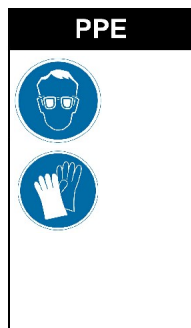
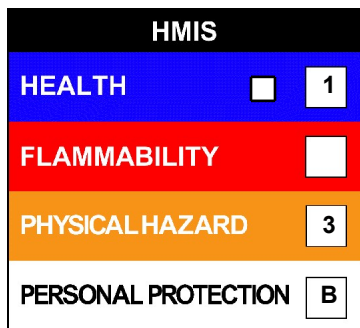
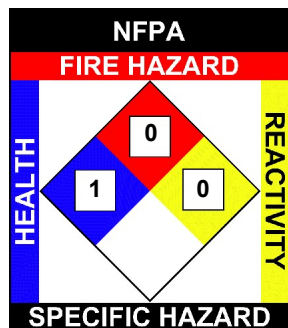
TXAIR = TX Air Contaminants with Health Effects Screening Level

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OTHER INFORMATION

NFPA: Health = 1, Fire = 0, Reactivity = 0, Specific Hazard = n/a
HMIS III: Health = 1, Fire = , Physical Hazard = 3
HMIS PPE: B - Safety Glasses, Gloves



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