

## Safety Data Sheet

Material Name: PROPANE

SDS ID: 00232330

### Section 1 - PRODUCT AND COMPANY IDENTIFICATION

**Material Name**

PROPANE

**Synonyms**

MTG MSDS 76; N-PROPANE; DIMETHYLMETHANE; PROPYL HYDRIDE; R-290; PROPYLHYDRIDE; LIQUEFIED PETROLEUM GAS; LPG; >96% NATURAL GRADE; >99.9% PURE GRADE; UN 1978; C3H8

**Chemical Family**

Hydrocarbons, aliphatic

**Product Description**

Classification determined in accordance with Compressed Gas Association standards

**Product Use**

Industrial and Specialty Gas Applications

**Restrictions on Use**

None known.

**Details of the supplier of the safety data sheet**

SPECIALTY CHEMICAL PRODUCTS

1407 Pennsylvania Ave.

South Houston, TX 77587

General Information: 713-944-0900

Emergency #: 1-800-424-9300 (CHEMTREC)

Outside the US: 1-703-527-3887 (Call collect)

### Section 2 - HAZARDS IDENTIFICATION

**Classification in accordance with paragraph (d) of 29 CFR 1910.1200.**

Flammable Gases - Category 1

Gases Under Pressure - Liquefied gas

Simple Asphyxiant

**GHS Label Elements**

**Symbol(s)**



**Signal Word**

Danger

**Hazard Statement(s)**

Extremely flammable gas.

Contains gas under pressure; may explode if heated.

May displace oxygen and cause rapid suffocation.

**Precautionary Statement(s)**

**Prevention**

Keep away from heat/sparks/open flame/hot surfaces - No smoking.

**Response**

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

Eliminate all ignition sources if safe to do so.

**Storage**

Protect from sunlight. Store in a well-ventilated place.

**Disposal**

Dispose of contents/container in accordance with local/regional/national/international regulations.

### Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
74-98-6	PROPANE	>96

This product may be regulated, have exposure limits or other information identified as the following: Aliphatic hydrocarbon gases: Alkanes (C1-4).

### Section 4 - FIRST AID MEASURES

**Inhalation**

If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.

**Skin**

If frostbite or freezing occur, immediately flush with plenty of lukewarm water (105-115°F; 41-46°C). DO NOT USE HOT WATER. If warm water is not available, gently wrap affected parts in blankets. Get immediate medical attention.

**Eyes**

Contact with liquid: Immediately flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

**Ingestion**

If a large amount is swallowed, get medical attention.

**Most Important Symptoms/Effects**

**Acute**

nausea, vomiting, irregular heartbeat, headache, symptoms of drunkenness, disorientation, suffocation, convulsions, coma, blisters, frostbite, blurred vision

**Delayed**

nausea, vomiting, irregular heartbeat, headache, symptoms of drunkenness, disorientation, suffocation, convulsions, coma

**Note to Physicians**

For inhalation, consider oxygen.

### Section 5 - FIRE FIGHTING MEASURES

**Extinguishing Media**

**Suitable Extinguishing Media**

carbon dioxide, regular dry chemical, Large fires: Flood with fine water spray.

**Unsuitable Extinguishing Media**

None known

**Special Hazards Arising from the Chemical**

Extremely flammable gas. Severe explosion hazard. Gas/air mixtures are explosive. The vapor is heavier than air. Vapors or gases may ignite at distant ignition sources and flash back. Electrostatic discharges may be generated by flow or agitation resulting in ignition or explosion.

**Hazardous Combustion Products**

Oxides of carbon

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**Fire Fighting Measures**

Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. For fires in cargo or storage area: Cool containers with water from unmanned hose holder or monitor nozzles until well after fire is out. If this is impossible then take the following precautions: Keep unnecessary people away, isolate hazard area and deny entry. Let the fire burn. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. For tank, rail car or tank truck: Stop leak if possible without personal risk. Let burn unless leak can be stopped immediately. For smaller tanks or cylinders, extinguish and isolate from other flammables. Evacuation radius: 800 meters (1/2 mile). Stop flow of gas.

**Special Protective Equipment and Precautions for Firefighters**

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

**Section 6 - ACCIDENTAL RELEASE MEASURES**

**Personal Precautions, Protective Equipment and Emergency Procedures**

Wear personal protective clothing and equipment, see Section 8.

**Methods and Materials for Containment and Cleaning Up**

Avoid heat, flames, sparks and other sources of ignition. Do not touch spilled material. Reduce vapors with water spray. Keep unnecessary people away, isolate hazard area and deny entry. Remove sources of ignition. Ventilate closed spaces before entering.

**Environmental Precautions**

Avoid release to the environment.

**Section 7 - HANDLING AND STORAGE**

**Precautions for Safe Handling**

Do not eat, drink, or smoke when using this product. Do not breathe gas, fumes, vapor, or spray. Use only with adequate ventilation. Wash hands thoroughly after use. Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

**Conditions for Safe Storage, Including any Incompatibilities**

Protect from sunlight. Store in a well-ventilated place.

Store and handle in accordance with all current regulations and standards. Subject to storage regulations: U.S. OSHA 29 CFR 1910.110. Grounding and bonding required. U.S. OSHA 29 CFR 1910.101. Keep separated from incompatible substances.

**Incompatible Materials**

oxidizing materials, combustible materials

**Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Component Exposure Limits**

<b>PROPANE</b>	<b>74-98-6</b>
ACGIH:	(See Appendix F: Minimal Oxygen Content, explosion hazard )
NIOSH:	1000 ppm TWA ; 1800 mg/m <sup>3</sup> TWA
	2100 ppm IDLH (10% LEL )
OSHA (US):	1000 ppm TWA ; 1800 mg/m <sup>3</sup> TWA
Mexico:	1000 ppm TWA [VLE-PPT ]

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**ACGIH - Threshold Limit Values - Biological Exposure Indices (BEI)**

There are no biological limit values for any of this product's components.

**Engineering Controls**

Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

**Individual Protection Measures, such as Personal Protective Equipment**

**Eye/face protection**

For the gas: Eye protection not required, but recommended. For the liquid: Wear splash resistant safety goggles. Contact lenses should not be worn. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

**Skin Protection**

For the gas: Protective clothing is not required. For the liquid: Wear appropriate protective, cold insulating clothing.

**Respiratory Protection**

The following respirators and maximum use concentrations are drawn from NIOSH and/or OSHA. 2100 ppm. Any supplied-air respirator. Any self-contained breathing apparatus with a full facepiece. Emergency or planned entry into unknown concentrations or IDLH conditions -. Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode. Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode. Escape -. Any appropriate escape-type, self-contained breathing apparatus.

**Glove Recommendations**

Wear insulated gloves.

**Section 9 - PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	Not available	<b>Physical State</b>	gas
<b>Odor</b>	gasoline odor	<b>Color</b>	colorless
<b>Odor Threshold</b>	5000 - 20000 ppm	<b>pH</b>	Not available
<b>Melting Point</b>	-190 °C (-310 °F )	<b>Boiling Point</b>	-40 °C (-40 °F )
<b>Boiling Point Range</b>	Not available	<b>Freezing point</b>	Not available
<b>Evaporation Rate</b>	Not available	<b>Flammability (solid, gas)</b>	Flammable gas
<b>Autoignition Temperature</b>	450 °C (842 °F )	<b>Flash Point</b>	-105 °C (-157 °F )
<b>Lower Explosive Limit</b>	2.1 %	<b>Decomposition temperature</b>	Not available
<b>Upper Explosive Limit</b>	9.5 %	<b>Vapor Pressure</b>	6398 mmHg @ 21.1 °C
<b>Vapor Density (air=1)</b>	1.55	<b>Specific Gravity (water=1)</b>	0.5853 at -45 °C
<b>Water Solubility</b>	very slightly soluble	<b>Partition coefficient: n-octanol/water</b>	Not available

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<b>Viscosity</b>	Not available	<b>Kinematic viscosity</b>	Not available
<b>Solubility (Other)</b>	Not available	<b>Density</b>	Not available
<b>Physical Form</b>	Liquefied gas	<b>Molecular Formula</b>	C-H3-C-H2-C-H3
<b>Molecular Weight</b>	44.11		

**Solvent Solubility**

**Soluble**

absolute alcohol, ether, chloroform, Benzene, turpentine

### Section 10 - STABILITY AND REACTIVITY

**Reactivity**

No reactivity hazard is expected.

**Chemical Stability**

Stable at normal temperatures and pressure.

**Possibility of Hazardous Reactions**

Will not polymerize.

**Conditions to Avoid**

Avoid heat, flames, sparks and other sources of ignition. Minimize contact with material. Containers may rupture or explode if exposed to heat.

**Incompatible Materials**

oxidizing materials, combustible materials

**Hazardous decomposition products**

Oxides of carbon

### Section 11 - TOXICOLOGICAL INFORMATION

**Information on Likely Routes of Exposure**

**Inhalation**

nausea, vomiting, irregular heartbeat, headache, symptoms of drunkenness, Disorientation, suffocation, convulsions, coma

**Skin Contact**

blisters, frostbite

**Eye Contact**

frostbite, blurred vision

**Ingestion**

frostbite

**Acute and Chronic Toxicity**

**Component Analysis - LD50/LC50**

The components of this material have been reviewed in various sources and the following selected endpoints are published:

**PROPANE (74-98-6)**

Inhalation LC50 Rat >800000 ppm 15 min

**Product Toxicity Data**

**Acute Toxicity Estimate**

Inhalation - Gas	> 20000 ppm
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**Immediate Effects**

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nausea, vomiting, irregular heartbeat, headache, symptoms of drunkenness, disorientation, suffocation, convulsions, coma, blisters, frostbite, blurred vision

**Delayed Effects**

nausea, vomiting, irregular heartbeat, headache, symptoms of drunkenness, disorientation, suffocation, convulsions, coma

**Irritation/Corrosivity Data**

No animal testing data available for skin or eyes.

**Respiratory Sensitization**

No data available.

**Dermal Sensitization**

No data available.

**Component Carcinogenicity**

None of this product's components are listed by ACGIH, IARC, NTP, DFG or OSHA.

**Germ Cell Mutagenicity**

No data available.

**Tumorigenic Data**

No data available

**Reproductive Toxicity**

No data available.

**Specific Target Organ Toxicity - Single Exposure**

No target organs identified

**Specific Target Organ Toxicity - Repeated Exposure**

No target organs identified

**Aspiration hazard**

No data available.

**Medical Conditions Aggravated by Exposure**

No data available.

**Additional Data**

Stimulants such as epinephrine may induce ventricular fibrillation.

### **Section 12 - ECOLOGICAL INFORMATION**

**Ecotoxicity**

Avoid release to the environment.

**Component Analysis - Aquatic Toxicity**

No LOLI ecotoxicity data are available for this product's components.

**Persistence and Degradability**

No data available.

**Bioaccumulative Potential**

No data available.

**Mobility**

No data available.

### **Section 13 - DISPOSAL CONSIDERATIONS**

**Disposal Methods**

Dispose in accordance with all applicable regulations.

**Component Waste Numbers**

The U.S. EPA has not published waste numbers for this product's components.

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### Section 14 - TRANSPORT INFORMATION

**US DOT Information:**

**Shipping Name:** PROPANE  
**Hazard Class:** 2.1  
**UN/NA #:** UN1978  
**Required Label(s):** 2.1

**IMDG Information:**

**Shipping Name:** PROPANE  
**Hazard Class:** 2.1  
**UN#:** UN1978  
**Required Label(s):** 2.1

**TDG Information:**

**Shipping Name:** PROPANE  
**Hazard Class:** 2.1  
**UN#:** UN1978  
**Required Label(s):** 2.1

**International Bulk Chemical Code**

This material does not contain any chemicals required by the IBC Code to be identified as dangerous chemicals in bulk.

### Section 15 - REGULATORY INFORMATION

**U.S. Federal Regulations**

None of this product's components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

**SARA Section 311/312 (40 CFR 370 Subparts B and C) reporting categories**

Flammable; Gas Under Pressure; Simple Asphyxiant

**U.S. State Regulations**

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
<b>PROPANE</b>	<b>74-98-6</b>	No	Yes	Yes	Yes	Yes

**California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)**

Not listed under California Proposition 65.

**Component Analysis - Inventory**

**PROPANE (74-98-6)**

US	CA	AU	CN	EU	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2
Yes	DSL	Yes	Yes	EIN	Yes	Yes	Yes	No

KR - REACH CCA	MX	NZ	PH	TH-TECI	TW, CN	VN (Draft)
No	Yes	Yes	Yes	Yes	Yes	Yes

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### Section 16 - OTHER INFORMATION

#### NFPA Ratings

Health: 1 Fire: 4 Instability: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

#### Summary of Changes

Updated: 03/15/2016

#### Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CA/MA/MN/NJ/PA - California/Massachusetts/Minnesota/New Jersey/Pennsylvania\*; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CFR - Code of Federal Regulations (US); CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EC - European Commission; EEC - European Economic Community; EIN - European Inventory of (Existing Commercial Chemical Substances); EINECS - European Inventory of Existing Commercial Chemical Substances; ENCS - Japan Existing and New Chemical Substance Inventory; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; F - Background (for Venezuela Biological Exposure Indices); IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; ISHL - Japan Industrial Safety and Health Law; IUCLID - International Uniform Chemical Information Database; JP - Japan; Kow - Octanol/water partition coefficient; KR KECI Annex 1 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL); KR KECI Annex 2 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL), KR - Korea; LD50/LC50 - Lethal Dose/ Lethal Concentration; KR REACH CCA - Korea Registration and Evaluation of Chemical Substances Chemical Control Act; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; MX - Mexico; Ne- Non-specific; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; Nq - Non-quantitative; NSL - Non-Domestic Substance List (Canada); NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PEL - Permissible Exposure Limit; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH - Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; Sc - Semi-quantitative; STEL - Short-term Exposure Limit; TCCA - Korea Toxic Chemicals Control Act; TDG - Transportation of Dangerous Goods; TH-TECI - Thailand - FDA Existing Chemicals Inventory (TECI); TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act; TW - Taiwan; TWA - Time Weighted Average; UEL - Upper Explosive Limit; UN/NA - United Nations /North American; US - United States; VLE - Exposure Limit Value (Mexico); VN (Draft) - Vietnam (Draft); WHMIS - Workplace Hazardous Materials Information System (Canada).

#### Other Information

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