

PEG, INC. DBA PACIFIC ENERGY GROUP A DIVISION OF -- LIQUIFIED PETROLEUM
GAS, LP-GAS, LPG, PROPANE -- -

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Product Identification
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Product ID:LIQUIFIED PETROLEUM GAS, LP-GAS, LPG, PROPANE
MSDS Date:08/01/1996
FSC:NIIN:Submitter:N EN
Status Code:A
=== Responsible Party ===
Company Name:PEG, INC. DBA PACIFIC ENERGY GROUP A DIVISION OF
Address:UNITED LIQUID GAS CO.
Box:398
City:PASO ROBLES
State:CA
ZIP:93446
Country:US
Info Phone Num:(800) 726-5747; (805) 239-2182
Emergency Phone Num:(800) 633-8253 (PERS, INC)
CAGE:TO802

==== Contractor Identification ====
Company Name:PEG INC. DBA PACIFIC ENERGY GROUP (DIV OF UNITED LIQUID
GAS)
Box:398
City:PASO ROBLES
State:CA
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Phone:800-726-5747;805-239-2182
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Composition/Information on Ingredients
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Ingred Name:PROPANE
CAS:74-98-6
RTECS #:TX2275000
= Wt:92.
OSHA PEL:1000 PPM
ACGIH TLV:SIMPLE ASPHYXIAN

Ingred Name:PROPYLENE
CAS:115-07-1
RTECS #:UC6740000
= Wt:5.

Ingred Name:BUTANE
CAS:106-97-8
RTECS #:EJ4200000
= Wt:3.

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Hazards Identification
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Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:PRODUCT IS A SIMPLE ASPHYXIAN IN HIGH
CONCENTRATIONS. INHALATION: EXPOSURE MAY PRODUCE RAPID BREATHING,
HEADACHE, DIZZINESS, DISTURBANCES, MUSCULAR WEAKNESS, TREMORS,

NARCOSIS, UNCONCIOUSNESS AND DEATH, DEPENDING ON DURATION AND CONCENTRATION OF EXPOSURE. EYE CONTACT: THIS GAS IS NON-IRRITATING, BUT DIRECT CONTACT WITH LIQUIFIED, PRESSURIZED GAS OR FROST PARTICLES MAY PRODUCE SEVERE AND POSSIBLE PERMANENT EYE DAMAGE FROM FREEZE BURNS. SKIN CONTACT: THIS MATERIAL IS NOT EXPECTED TO BE ABSORBED THROUGH THE SKIN. NON-IRRITATING; BUT SOLID AND LIQUID FORMS OF THIS MATERIAL AND PRESSURIZED GAS CAN CAUSE FREEZE BURNS. (EFFECTS OF OVEREXP)

Explanation of Carcinogenicity: PRODUCT IS NOT LISTED AS A CARCINOGEN OR POTENTIAL CARCINOGEN BY NTP, IARC OR OSHA.

Effects of Overexposure: HEALTH HAZARDS ACUTE AND CHRONIC (CONT):
INGESTION: SOLID AND LIQUID FORMS OF THIS MATERIAL AND THE PRESSURIZED GAS CAN CAUSE FREEZE BURNS.

Medical Cond Aggravated by Exposure: SPECIAL HEALTH EFFECTS: PERSONNEL WITH PRE-EXISTING CHRONIC RESPIRATORY DISEASES SHOULD AVOID EXPOSURE TO THIS MATERIAL.

===== First Aid Measures =====

First Aid: INHALATION: IMMEDIATELY MOVE PERSONNEL TO FRESH AIR. FOR RESPIRATORY DISTRESS, GIVE AIR, OXYGEN OR ADMINISTER CPR (CARDIOPULMONARY RESUSCITATION) IF NECESSARY. OBTAIN MEDICAL ATTENTION IF BREATHING DIFFICULTIES CONTINUE. EYE CONTACT: VAPORS ARE NOT EXPECTED TO PRESENT AN EYE IRRITATION HAZARD. IF CONTACTED BY LIQUID/SOLID, IMMEDIATELY FLUSH EYE(S) GENTLY WITH WARM WATER FOR AT LEAST 15 MINUTES. SEE A MEDICAL ATTENTION IF PAIN OR REDNESS PERSISTS. INGESTION: INDUCE VOMITING WITH WARM WATER (QT.) ONLY IF PATIENT CONSCIOUS. IMMEDIATELY OBTAIN MEDICAL ATTENTION. SKIN CONTACT: FLUSH WITH COPIOUS AMOUNTS OF WATER. CONTACT A PHYSICIAN

===== Fire Fighting Measures =====

Flash Point: -104.4C, -156.F

ESTIMATED

Autoignition Temp: 450.C, 842.F

Lower Limits: 2.1%

Upper Limits: 9.5%

Extinguishing Media: DRY CHEMICAL, WATER SPRAY, FOAM, CO2.

Fire Fighting Procedures: USE NIOSH-APPROVED SCBA AND FULL PROTECTIVE EQUIPMENT. EVACUATE AREA. SHUT OFF SOURCE OF GAS, IF POSSIBLE. NOTIFY FIRE DEPARTMENT. REMAIN UP-WIND OF VAPORS. ALLOW ONLY PROPERLY PROTECTED PERSONNEL IN AREA. READILY FORMS EXPLOSIVE WITH AIR AND OXIDIZERS. ALLOW FIRE TO BURN UNTIL GAS FLOW IS SHUT OFF. (EXPLO HAZ)

Unusual Fire/Explosion Hazard: FIRE FIGHT PROC (CONT): USE WATER SPRAY TO COOL EXPOSED EQUIPMENT AND VAPOR SPACE OF CONTAINERS, CONTAINERS MAY RUPTURE IF EXPOSED TO HEAT OR FLAME. APPROACH A FLAME-ENVELOPED CONTAINER FROM SIDE NEVER FROM THE HEAD ENDS. FOR MASSIVE, UNCONTROLLABLE FIRES AND WHEN FLAME IS IMPINGING ON VAPOR SPACE (OTHER INFORMATION)

===== Accidental Release Measures =====

Spill Release Procedures: PRODUCT IS EXTREMELY FLAMMABLE. VAPOR IS HEAVIER THAN AIR AND MAY COLLECT AT LOWER LEVELS. IF THERE IS A LEAK BUT NO FIRE, DO NOT IGNITE THE ESCAPED GAS. ELIMINATE ALL

IGNITION SOURCES. WATER SPRAY CAN BE USED TO HELP DILUTE VAPOR CONCENTRATION IN AIR. IF POSSIBLE, REMOVE LEAKING CONTAINER TO SAFE AREA.

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===== Handling and Storage =====

Handling and Storage Precautions:STORE AND USE CYLINDERS AND TANKS IN A WELL VENTILATED AREA, AWAY FROM HEAT AND SOURCES OF IGNITION. NO SMOKING NEAR STORAGE OR USE. FOLLOW STANDARD PROCEDURES FOR HANDLING CYLINDERS, TANKS, LOADING/UNLOADING. FIXED STORAGE CONTAINERS MUST BE GROUNDED AND BONDED DURING TRANSFER OF PRODUCT.

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===== Exposure Controls/Personal Protection =====

Respiratory Protection:FOR EXCESSIVE GAS CONCENTRATIONS, USE ONLY NIOSH (APPROVED -) SELF-CONTAINED BREATHING APPARATUS.

Protective Gloves:INSULATED, IMPERVIOUS PLASTIC OR NEOPRENE COATED CANVAS GLOVES.

Eye Protection:USE (ANSI APPROVED -) CHEMICAL-TYPE GOGGLES AND FACE SHIELD (SUPP SAFETY)

Other Protective Equipment:EYEWASH AND DELUGE SHOWER MEETING ANSI DESIGN CRITERIA . USE INSULATED, IMPERVIOUS PLASTIC OR NEOPRENE COATED CANVAS PROTECTIVE GEAR (APRON, FACE SHIELD, ETC.) TO PROTECT HANDS & OTHER SKIN AREAS.

Work Hygienic Practices:PREVENT POTENTIAL SKIN CONTACT WITH COLD LIQUID/SOLID/VAPORS.

Supplemental Safety and Health

EYE PROTECT (CONT): WHEN HANDLING LIQUEFIED GASES. (ANSI APPROVED -) SAFETY GLASSES AND/OR FACE SHIELD ARE RECOMMENDED WHEN HANDLING HIGH PRESSURE CYLINDERS AND PIPING SYSTEM AND WHENEVER VAPORS ARE DISCHARGED.

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===== Physical/Chemical Properties =====

Boiling Pt:=-42.2C, -44.F

Vapor Pres:208 PSIG @ 100 F.

Vapor Density:1.55 AIR=1

Spec Gravity:.508 (H2O=1)

Evaporation Rate & Reference:NA GAS @STD TEMP & PRESS.

Solubility in Water:SLIGHT.

Appearance and Odor:COLORLESS LIQUEFIED PETROLEUM GAS. ODOR: (OTHER INFO)

Percent Volatiles by Volume:100%

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===== Stability and Reactivity Data =====

Stability Indicator/Materials to Avoid:YES

STRONG OXIDIZING AGENTS.

Hazardous Decomposition Products:COMBUSTION MAY PRODUCE CARBON MONOXIDE AND OTHER HARMFUL SUBSTANCES.

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===== Toxicological Information =====

Toxicological Information:OCCUPATIONAL EXPOSURE LIMITS: ACGIH LISTS AS A SIMPLE ASPHYXIANANT. OSHA TWA 1000 PPM. STATE REGS (CONT): REPRODUCTIVE HARM." THE BENZENE AND TOULENE ARE DESTROYED WHEN PROPANE IS BURNED. RADON DOES NOT BURN BUT IS RELEASED WITH THE

COMBUSTION BY-PRODUCTS. RADON AND PROPANE COMBUSTION BY-PRODUCTS CAN GENERALLY BE REMOVED THROUGH APPLIANCE VENTS AND OTHER EXHAUST SYSTEMS. WHEN PROPANE IS PROCESS ED IN SOME DEHYDRATORS, BENZENE AND TOULENE CAN BE RELEASED TO THE ENVIRONMENT. A WARNING ODORANT IS ADDED TO PROPANE SO LEAKS OF UNBURNED GAS CAN BE QUICKLY DETECTED. IF GAS ODOR IS DETECTED, YOUR SU PPLIER SHOULD BE CONTACTED PROMPTLY.

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Ecological Information
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Ecological:ENVIRONMENTAL EFFECTS: AVOID UNCONTROLLED RELEASES OF THIS MATERIAL. LIQUID RELEASE WILL HAVE POSSIBLE EFFECT ON PLANT AND ANIMAL LIFE. LARGE LIQUID RELEASE WILL QUICKLY VAPORIZE TO PRODUCE A LARGE V APOR CLOUD. VAPOR CLOUD IS BOTH A FIRE AND ASPHYXIATION HAZARD.

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Disposal Considerations
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Waste Disposal Methods:DISPOSAL OF GAS IN ACCORDANCE WITH APPLICABLE LAWS AND REGULATIONS. VENT VAPOR IN SAFE LOCATION AND INSURE THAT GAS DISSIPATES BELOW THE LOWER FLAMMABLE LIMIT. CONTROLLED BURNING IS PREFERRED.

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MSDS Transport Information
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Transport Information:D.O.T. HAZARD CLASS: FLAMMABLE GAS. D.O.T. ID NO (UN/NA): UN 1075 LIQUEFIED PETROLEUM GAS (LPG). D.O.T. SHIPPING NAME: PROPANE OR LIQUEFIED PETROLEUM GAS. IMO SHIPPING NAME: PROPANE BUTANE. IMO HA ZARD CLASS: 2.1. IMO LABEL: FLAMMABLE GAS.

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Regulatory Information
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State Regulatory Information:PROPOSITION 65 [PUBLIC WARNING] THE SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT 1986, COMMONLY REFERRED TO AS PROPOSITION 65, REQUIRES THEN GOVERNOR TO PUBLISH A LIST OF CHEMICALS "KNOWN TO THE STAT E TO CAUSE CANCER, BIRTH DEFECTS OR REPRODUCTIVE HARM." IT ALSO REQUIRES CALIFORNIA BUSINESSES TO WARN THE PUBLIC QUARTERLY OF POTENTIAL EXPOSURE TO THESE CHEMICALS WHICH RESULT FROM THEIR OPERATIONS. LIQUIFIED PETROLEUM GAS (PROPANE), IN ITS ORIGINAL STATE, CONTAINS RADON AND BENZENE, CHEMICALS "KN OWN TO STATE OF CALIFORNIA TO CAUSE CANCER." ALSO CONTAINS TOULENE, A CHEMICAL "KNOWN TO STATE OF CALIFORNIA TO CAUSE (TOXICOLOGICAL)

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Other Information
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