

FERRELLGAS -- PROPANE-ODORIZED -- 6830-00-985-7278

===== Product Identification =====

Product ID:PROPANE-ODORIZED  
MSDS Date:11/01/1999  
FSC:6830  
NIIN:00-985-7278  
Status Code:A  
MSDS Number: CLHVZ  
=== Responsible Party ===  
Company Name:FERRELLGAS  
Address:1 LIBERTY PLAZA  
City:LIBERTY  
State:MO  
ZIP:64068-2970  
Country:US  
Info Phone Num:816-792-1600; 816-792-6916  
Emergency Phone Num:800-424-9300  
Preparer'  
s Name:C.C. SLISZ  
Chemtrec Ind/Phone:(800)424-9300  
CAGE:0CH06  
=== Contractor Identification ===  
Company Name:FERRELLGAS  
Address:1 LIBERTY PLAZA  
Box:City:LIBERTY  
State:MO  
ZIP:64068-2970  
Country:US  
Phone:816-792-1600; 816-792-6916  
CAGE:0CH06

===== Composition/Information on Ingredients =====

Ingred Name:PROPANE  
CAS:74-98-6  
RTECS #:TX2275000  
Minumum % Wt:85.  
Maxumum % Wt:100.  
OSHA PEL:1800 MG/M3;1000 PPM

Ingred Name:BUTANE  
CAS:106-97-8  
RTECS #:EJ4200000  
Minumum % Wt:0.  
Maxumum

% Wt:2.5  
ACGIH TLV:1900 MG/M3;800 PPM

Ingred Name:ETHANE  
CAS:74-84-0  
RTECS #:KH3800000  
Minumum % Wt:0.  
Maxumum % Wt:5.

Ingred Name:ETHYL MERCAPTAN  
CAS:75-08-1  
RTECS #:KI9625000  
&lt; Wt:.1  
OSHA PEL:C25 MG/M3;C10 PPM  
ACGIH TLV:1.3 MG/M3;0.5 PPM

Ingred Name:PROPYLENE  
CAS:1151-07-1  
Minumum % Wt:0.  
Maxumum % Wt:10.

===== Hazards Identification =====

Routes of Entry: Inhalation:YES Skin:YES Ingestion:NO  
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO  
Healt

h Hazards Acute and Chronic:EYE: DIRECT CONTACT WITH LIQUID  
PROPANE CAN RESULT IN EYE BURNS. SKIN: DIRECT CONTACT WITH LIQUID  
PROPANE CAN RESULT IN SKIN BURNS (FROSTBITE). INHALTION: THIS  
PRODUCT IS CLASSIFIED AS A SIMPLE ASPHYX IANT. HIGH VAPOR  
CONCENTRATIONS MAY PRODUCE A REVERSIBLE CENTRAL NERVOUS SYSTEM  
DEPRESSION (ANESTHESIA). HIGHER CONCENTRATIONS MAY PRODUCE  
ASPHYXIATION. INGESTION: IS NOT LIKELY.

Explanation of Carcinogenicity:THIS PRODUCT IS NOT CLASSIFIED AS A  
CARCINOGEN.

Effects of Overexposure:EYE OR SKIN BURNS (FROSTBITE) AS NOTED  
PREVIOUSLY. EARLY TO MODERATE DEPRESSION MAY BE EVIDENCED BY  
GIDDINESS, HEADACHE, DIZZINESS AND NAUSEA. IN EXTREME CASES,  
UNCONSCIOUSNESS MAY OCCUR. ASPHYXIATION MAY BE NOTED BY A SUDDEN  
LOSS OF CONSCIOUSNESS. DEATH MAY QUICKLY FOLLOW.

Medical Cond Aggravated by Exposure:CAUTION IS RECOMMENDED FOR  
PERSONNEL WITH PRE-EXISTING CENTRAL NERVOUS SYSTEM OR CHRONIC  
RESPIRATORY DISEASE.

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

First Aid:EYES: FLUSH EYES WITH WATER. GET MEDICAL ATTENTION. SKIN: FLUSH WITH WATER. IF FROSTBITE OR BURN OCCURS, GET MEDICAL ATTENTION. INHALTION: REMOVE VICTIM TO FRESH AIR AND PROVIDE OXYGEN IF BREATHING IS DIFFICULT. SEEK IMMEDIATE MEDICAL ATTENTION IF VICTIM IS NOT BREATHING. GIVE ARTIFICIAL RESPIRATION. INGESTION: IS NOT APPLICABLE TO THIS PRODUCT.

===== Fire Fighting Measures =====  
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Flash Point:=-104.4C, -156.F

Autoignition Temp:=504.4C, 940.F

Lower Limits:2.15%

Upper Limits:9.6

Extinguishing Media:ALLOW PRODUCT TO BURN IF SOURCE CANNOT BE SHUT OFF SAFELY. CLASS B-C OR A-B-C DRY CHEMICAL OR HALON EXTINGUISHERS CAN BE USED ON SMALL FIRES.

Fire Fighting Procedures:APPLY WATER FROM SAFE DISTANCE TO COOL CONTAINERS, SURROUNDING EQUIPMENT, AND STRUCTURES. EVACUATE SURROUNDING AREA OF UNPROTECTED PERSONNEL AND ISOLATE. DO NOT ENTER CONFINED FIRE SPACE WITHOUT FULL BUNKER GEAR (HELMET/FACE SHIELD, BUNKER COAT, GLOVES; RUBBER BOOTS) AND POSITIVE PRESSURE NIOSH APPROVED SCBA.

Unusual Fire/Explosion Hazard:EXTREMELY FLAMMABLE. CONTAINERS MAY EXPLODE IF NOT SUFFICIENTLY COOLED WITH WATER SPRAY.

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

Spill Release Procedures:WARNING EXTREMELY FLAMMABLE! \*ELIMINATE SOURCES OF IGNITION. \*ISOLATE HAZARD AREA AND DENY ENTRY TO UNNECESSARY OR UNPROTECTED PERSONNEL. \*STAY UPWIND AND KEEP OUT OF LOW AREAS. \*NOTIFY LOCAL FIRE DEPARTMENT. \*DISPERSE VAPOR CLOUDS WITH WATER SPRAY. \*SHUT OFF SOURCE OF LEAK ONLY IF IT CAN BE DONE SAFELY.

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

Handling and Storage Precautions:HANDLE AND STORE PROPANE IN ACCORDANCE WITH NFPA 58 AND LOCAL FIRE CODES. KEEP CONTAINERS AWAY FROM HEAT SOURCES OR TEMPERATURES EXCEEDING 130 F. DO NOT DROP OR ROLL ANY CYLINDER. STORE AND TRANSPORT CONTAINERS UPRIGHT AND SECURELY FASTENED.

NERS WITH RELIEF VALVES IN

VAPOR SPACE. KEEP ALL CONTAINER VALVES CLOSED WHEN NOT IN USE.

Other Precautions:KEEP PROTECTIVE CAPS (IF APPLICABLE) ON CONTAINERS WHEN NOT IN USE. CONTAINERS, EVEN THOSE THAT HAVE BEEN EMPTIED, CAN CONTAIN EXPLOSIVE VAPORS. DO NOT CUT, DRILL, GRIND, WELD OR PERFORM SIMILAR OPERATIONS ON OR NEAR CONTAINERS.

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

Respiratory Protection:USE A NIOSH APPROVED RESPIRATOR AS REQUIRED WHEN

AIRBORNE EXPOSURE LIMITS ARE EXCEEDED. IN ACCORD WITH 29 CFR 1910.134, USE EITHER AN ATMOSPHERE SUPPLYING RESPIRATOR OR AN AIR PURIFYING RESPIRATOR FOR ORGANIC VAPORS.

Ventilation:USE EXPLOSION-PROOF VENTILATION AS REQUIRED TO CONTROL VAPOR CONCENTRATIONS.

Protective Gloves:AS APPROPRIATE

Eye Protection:WEAR SAFETY GLASSES OR GOGGLES

Other Protective Equipment:WEAR PROTECTIVE CLOTHING AS APPROPRIATE.

Work Hygienic Practices:AVOID LIQUID CONTACT WITH EYES OR SKIN.

Supplemental Safety and Health

6830-01-398-9004 CANCELLED 1998 FOR THIS PRODUCT.ANIMAL STUDIES HAVE SHOWN THAT INHALATION OF HIGH VAPOR LEVELS OF THIS PRODUCT PRODUCED CARDIAC SENSITIZATION. SUCH SENSITIZATION MAY CAUSE FATAL CHANGES IN HEART RHYTHMS.LABORATORY ANIMALS EXPOSED TO HIGH LEVELS OF PROPYLENE SHOWED EFFECTS IN LIVER,KIDNEY,&NASAL CAVITY

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

HCC:G2

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

Vapor Pres:208PSIG@100F

Spec Gravity:1.52 (VAPOR)

Evaporation Rate & Reference: