

HC-12a/HC-22a

MATERIAL SAFETY DATA SHEET

(Complies with OSHA Communication Standard 29 CFR 1910.1200 Department of Labor)

IDENTITY: <div style="font-size: 1.5em; font-weight: bold; text-align: center;"> HC-12a HC-22a </div>	Compressed Gas - Flammable NOS Liquefied Petroleum UN 1954 Class 2	24-Hour Emergency Telephone Number (208) 755-3087
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Section 1:

Manufacturer's Name OZ Technology, Inc. Address 10278 N. Church Rd. Rathdrum, ID 83858, U.S.A.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Emergency Telephone Number (208) 687-7000</td> </tr> <tr> <td style="padding: 2px;">Telephone Number for Information (208) 687-7000</td> </tr> <tr> <td style="padding: 2px;">Date Prepared April 11, 2002</td> </tr> <tr> <td style="padding: 2px;">Signature of Preparer (Optional) Not Applicable</td> </tr> </table>	Emergency Telephone Number (208) 687-7000	Telephone Number for Information (208) 687-7000	Date Prepared April 11, 2002	Signature of Preparer (Optional) Not Applicable
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Section II: Hazardous Ingredients / Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH	Other Limits Recommended	%(Optional)
Trade Secret - HC-12a/HC-22a Compressed Hydrocarbon Mixture	TWA/PEL	OSHA	1800 Mg	100%
		Asphyxiant		

Section III: Physical / Chemical Characteristics

Boiling Point HC-12a: -29.0° F / HC-22a: -40° F	Specific Gravity (H₂O = 1) 0.552
Vapor Pressure (PSIG) HC-12a: 72 @ 70° F. / HC-22a: 110 @ 70° F	Melting Point Not Applicable
Vapor Density (Air = 1) 1.770	Evaporation Rate (Butyl Acetate = 1) Not Available
Solubility in Water Soluble	Ignition Temperature (Method used: Heated Metal Surface) 1490° F.
Appearance and Odor Colorless gas with natural gas odor	Auto-ignition Temperature 1627° F.

Section IV: Fire and Explosion Hazard Data

Flash Point (Method Used) Not Determined	Flammable Limits % Upper 8.5; % Lower 1.9	LEL N/A	NEL N/A
Extinguishing Media Use a water spray to cool fire-exposed containers, structures, and to protect personnel.			
Special Fire Fighting Procedures Shut off source of flow. Do not extinguish fire if gas source cannot be shut off. Use water spray to disperse gas or vapor and to protect personnel attempting to stop a leak.			
Unusual Fire and Explosion Hazards Heavy concentrations of vapor may form flammable mixtures with air. Heavy concentrations of vapor or gas may spread to distant ignition sources and flash back. Vapor or gas may accumulate in low or confined areas. Dangerous when exposed to flame or high temperature sparks. Containers may rupture when heated above their rated pressure values.			

Section V : Reactivity Data			
Stability	Unstable		Conditions to Avoid Heat, Strong oxidizers, Peroxides, Plastics, and Chlorine dioxide
	Stable	X	
Incompatibility (Materials to Avoid) Strong oxidizers, Peroxides, Plastics, and Chlorine dioxide			
Hazardous Decomposition or By-products When burned in a deficiency of oxygen, CO can form			
Hazardous Polymerization	May occur		Conditions to Avoid Strong oxidizers, Peroxides, Plastics, and Chlorine dioxide
	Will not Occur	X	
Section VI : Health Hazard Data			
Route(s) of Entry	Inhalation ? Yes	Skin ? Yes	Ingestion ? Not Applicable
Health Hazards (Acute and Chronic) Central nervous system depressant. Asphyxiant.Heavy exposure may cause anemia and irregular heart rhythm, respiratory arrest, and death.			
Carcinogenicity	NIP ?	ARC Monographs ? Presently not on any list	OSHA Regulation ?
Signs and Symptoms of Exposure Difficulty in breathing, dizziness, euphoria, and irritation of nose and throat. Contact with liquefied material may cause frostbite.			
Medical Conditions Generally Aggravated by Exposure Hydrocarbons may sensitize the heart to epinephrine and other circulating catecholamines.			
Emergency and First Aid Procedures Do not give epinephrine. Immerse frostbite in cool-warm water. Inhalation: remove from place of exposure. Insure breathing . Give oxygen or CPR if needed.			
Section VII : Precautions for Safe Handling and Use			
Steps To Be Taken in Case Material is Released or Spilled No flares or open flames in hazard area. Do not touch or walk through spilled materials. Use water spray to reduce vapors. Isolate and ventilate area until gas has dispersed. No special procedures are required for clean up. Avoid methods resulting in water pollution.			
Waste Disposal Method This material is not specifically listed as hazardous waste, but can be classified as hazardous waste when contaminated or if seen as ignitable under (40 CFR261).			
Precautions To Be Taken in Handling and Storing Store in tightly closed containers in cool, dry, isolated, well ventilated area away from heat and sources of ignition.			
Other Precautions Empty containers may contain flammable or combustible residue vapors. Do not cut, grind, drill, weld, or reuse containers without adequate precautions.			
Section VIII : Control Measures			
Respiratory Protection (Specify Type) NIOSH Approved			
Ventilation	Local Exhaust	Yes	Special None
	Mechanical (General)	None	Other None
Protective Gloves Use if in contact with liquid material		Eye Protection Use proper eye protection	
Other Protective Clothing or Equipment Long sleeves and long pants			
Work / Hygienic Practices Avoid open flames or ignition sources in excess of 1490° F			