Refrigerant V2

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

1.1. Product Identifier TM
Product Name: Sumgas V2

1.2. Intended Use of the Product
Refrigerant

1.3. Name,Address, and Telephone of the Responsible Party
Company
Ecosum LLC.
500 Brickell Ave
Miami, Fl 33131

1.4. Emergency Telephone Number
Emergency Number: 1-800-424-9300
CHEMTREC – TOLL FREE 24 HOUR EMERGENCY TELEPHONE NUMBER

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture
Classification (GHS-US)
Simple Asphy
Flam. Gas 1 H220
Liquefied gas H280

2.2. Label Elements
GHS-US Labeling
Hazard Pictograms (GHS-US):

Signal Word (GHS-US) : Danger
Hazard Statements (GHS-US) :
H220 - Extremely flammable gas

Precautionary Statements (GHS-US) :
H280 - Contains gas under pressure; may explode if heated
H380 - May displace oxygen and cause rapid suffocation
P210 - Keep away from heat, hot surfaces, open flames, sparks - No smoking.
P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381 - Eliminate all ignition sources if safe to do so.
P410+P403 - Protect from sunlight. Store in a well-ventilated place.

2.3. Other Hazards
No additional information available

2.4. Un known Acute Toxicity(GHS-US)

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance
Not applicable

Name	Product identifier	%	Classification (GHS-US)
Propane*	(CAS No) 74-98-6	100	Simple Asphy Flam. Gas 1, H220 Liquefied gas, H280

*Pharmaceutical Grade
Full text of H-phrases: see section 16

3.2. Mixture
Not applicable

SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures
First-aid Measures General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice.
First-aid Measures After Inhalation: When symptoms occur: go into open air and ventilate suspected area. Immediately call a POISON CENTER or doctor/physician.
First-aid Measures After Skin Contact: If frostbite or freezing occurs, immediately flush with plenty of lukewarm water to GENTLY warm the affected area. Donot use hot water. Do not rub affected area. Get immediate medical attention.
First-aid Measures After Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
First-aid Measures After Ingestion: Do not induce vomiting. Immediately call a POISON CENTER or doctor/physician.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms/Injuries: Gas can be toxic as a simple asphyxiant by displacing oxygen from the air. Refrigerated liquefied gas.
Symptoms/Injuries After Inhalation: Asphyxiant gas.
Symptoms/Injuries After Skin Contact: May cause frostbite.
Symptoms/Injuries After Eye Contact: Contact with the liquefied gas causes frostbite.
Symptoms/Injuries After Ingestion: Ingestion is an unlikely route of exposure for a gas.
Chronic Symptoms: Not available

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed
If exposed or concerned, get medical advice and attention

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing Media
Suitable Extinguishing Media: Dry chemical powder, alcohol - resistant foam carbon dioxide (CO2).
Unsuitable Extinguishing Media: Do not use heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising From the Substance or Mixture
Fire Hazard: flammable gas.
Explosion Hazard: Heat may build pressure, rupturing closed containers, spreading fire, increasing risk of burns and injuries.
Reactivity: Contains gas under pressure; may explode if heated. Reacts with oxidants causing fire/explosion hazard.

5.3. Advice for Firefighters
Precautionary Measures Fire: Exercise caution when fighting any chemical fire.
Firefighting Instructions: In case of fire: evacuate area. Fight fire remotely due to the risk of explosion. Use water spray or fog for cooling exposed containers.
Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures
General Measures: Use special care to avoid static electric charges. Keep away from open flames, hot surfaces and sources of ignition. No smoking. Donot get in eyes, on skin, or on clothing. Do not breathe gas.

6.1.1. For Non-emergency Personnel
Protective Equipment: Use appropriate personal protection equipment (PPE).
Emergency Procedures: Evacuate unnecessary personnel. Eliminate ignition sources.

6.1.2. For Emergency Responders
Protective Equipment: Equip clean up crew with proper protection.
Emergency Procedures: Stop leak if safe to do so. Ventilate area.

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SECTION 6: ACCIDENTAL RELEASE MEASURES

6.2. Environmental Precautions
Avoid release to the environment.

6.3. Methods and Material for Containment and Cleaning Up
For Containment: Stop leak without risks if possible. Do not take up in combustible material, such as sawdust.
Methods for Cleaning Up: Contact competent authorities after a spill.

6.4. Reference to Other Sections
See section 8, Exposure Controls and Personal Protection and section 13, Disposal Considerations

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling
Precautions for Safe Handling: Personnel should be trained to regularly inspect equipment such as pumps, hoses, and valves. Do not breathe gas. Ensure there is adequate ventilation. Close valve after each use and when empty. Open valve slowly to avoid pressure shock.
Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for Safe Storage, Including Any Incompatibilities
Technical Measures: Comply with applicable regulations. Keep at temperatures below 52°C / 125°F.
Storage Conditions: Store in a dry, cool and well - ventilated place. Keep in fireproof place. Store locked up.
Incompatible Products: Heat sources. Oxidizers

7.3. Specific End Use(s): Refrigerant

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

Petroleum gases, liquefied (68476-85-7)			
USA	ACGIH	ACGIH TWA (ppm)	1000 ppm
USA	NIOSH	NIOSH REL (TWA) (mg/m³)	1800 mg/m³
USA	NIOSH	NIOSH REL (TWA) (ppm)	1000 ppm
USA	IDLH	US IDLH (ppm)	2100 ppm (10% LEL)
USA	OSHA	OSHA PEL (TWA) (mg/m³)	1800 mg/m³
USA	OSHA	OSHA PEL (TWA) (ppm)	1000 ppm

8.2. Exposure Controls
Appropriate Engineering Control : Alarm detectors should be used when toxic and/or flammable gases may be released. Emergency eyewash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure all national/local regulations are observed. Gas mask. Protective goggles. Gloves. Protective clothing.

Materials for Protective Clothing: Chemically resistant materials and fabrics.
Hand Protection: Wear working gloves when handling gas containers.
Eye Protection: Safety glasses.
Skin and Body Protection: Wear suitable protective clothing.
Respiratory Protection: Use a NIOSH-approved respirator or self-contained breathing apparatus in oxygen deficient atmospheres
Thermal Hazard Protection: Wear cold insulating gloves

SECTION 9: FIREFIGHTING MEASURES

9.1. Information on Basic Physical and Chemical Properties
Physical State: Gas
Appearance: Clear, colorless gas
Odor: Odorless
Odor Threshold: No data available
pH: No data available
Relative Evaporation Rate (butylacetate=1): No data available
Melting Point : No data available
Freezing Point: - 151.67 °C (305°F)
Boiling Point: - 46.67 °C (52°F)
Flash Point : No data available
Auto-ignition Temperature: 467.22 °C (873°F)
Decomposition Temperature: No data available
Flammability (solid, gas): No data available
Vapor Pressure : 861.8 kPa (139 psi) at 21.1 °C (70°F)
Relative Vapor Density at 20 °C: 1.52
Relative Density/ Specific Gravity: 0.5066 (water =1)
Solubility: No data available
Partition Coefficient: N-octanol/water: No data available
Viscosity: No data available
Lower Flammable Limit: 2.15 %
Upper Flammable Limit: 9.6 %

9.2. Other Information
Gas group: Liquefied gas

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity: Contains gas under pressure; may explode if heated. Reacts with oxidants causing fire/explosion hazard.

10.2 Chemical Stability: Stable under recommended handling and storage conditions (see section 7).

10.3 Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

10.4 Conditions to Avoid: Direct sunlight. Extremely high or low temperatures. Open flame. Heat. Sparks.

10.5 Incompatible Materials: Heat. Strong oxidizers.

10.6 Hazardous Decomposition Products: Carbon oxides (CO, CO2).

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information On Toxicological Effects
Acute Toxicity: Not classified

Propane (74-98-6)

LC50 Inhalation Rat 658 mg/l/4h

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Skin Corrosion/Irritation: Not classified
Serious Eye Damage/Irritation: Not classified
Respiratory or Skin Sensitization: Not classified
Germ Cell Mutagenicity: Not classified
Carcinogenicity: Not classified
Reproductive Toxicity: Not classified
Specific Target Organ Toxicity (Single Exposure): Not classified
Specific Target Organ Toxicity (Repeated Exposure): Not classified

Aspiration Hazard: Not classified
Symptoms/Injuries After Inhalation: Asphyxiant gas.
Symptoms/Injuries After Skin Contact: May cause frostbite.
Symptoms/Injuries After Eye Contact: Contact with the liquefied gas causes frostbite.
Symptoms/Injuries After Ingestion: Ingestion is an unlikely route of exposure for a gas.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity:
Ecology-General: Harmful to aquatic life.

12.2. Persistence and Degradability No additional information available

12.3. Bioaccumulative Potential

Sumgas V2
Log Pow ←1

Propane
Log Pow 2.3

12.4. Mobility in Soil No additional information available

12.5. Other Adverse Effects
No additional information available

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods
Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.
Additional Information: Empty product containers may contain hazardous residue. Do not reuse empty containers without commercial cleaning or reconditioning.

SECTION 14: TRANSPORT INFORMATION

In Accordance With ICAO/IATA/IMDG/DOT

14.1. UN Number
Identification Number: UN1075

14.2. UN Proper Shipping Name
DOT Proper Shipping Name: Petroleum gases, liquefied or Petroleum gases, liquefied
Hazard Labels (DOT): 2.1 - Flammable gases
DOT Packaging Exceptions (49 CFR 173.xxx) : 306
DOT Packaging Non Bulk (49 CFR 173.xxx) : 304
DOT Packaging Bulk 49 CFR 173.xxx) : 314;315
Marine pollutant: No

14.3. Additional Information
Emergency Response Guide (ERG) Number : 115
Transport by Sea
DOT Vessel Stowage Location: E - The material may be stowed ''on deck'' or ''under deck'' on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length, but is prohibited from carriage on passenger vessels in which the limiting number of passengers is exceeded.
DOT Vessel Stowage Other: 40 - Stow ''clear of living quarters'' Air Transport
DOT Quantity Limitations Passenger Aircraft/Rail (49 CFR 173.27) : Forbidden
DOT Quantity Limitations Cargo Aircraft Only (49 CFR 175.75) : 150 kg)

SECTION 15: STABILITY AND REACTIVITY

15.1 US Federal Regulations

Chemical Ingredients:

Sumgas V2	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Fire hazard Sudden release of pressure hazard
Propane (74 - 98 - 6) Listed on the United States TSCA (Toxic Substances Control Act) inventory	

15.2 US State Regulations

Propane (74 - 98 - 6)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey -Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF Preparation OR LAST REVISION

Revision date : 12/30/2014
Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200

GHS Full Text Phrases:

Refrigerant V2

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF Preparation OR LAST REVISION

GHS Full Text Phrases:

Flam. Gas 1	Flammable gases Category 1
Liquefied gas	Gases under pressure Liquefied gas
Simple Asphy	Simple Asphyxiant
H220	Extremely flammable gas
H280	Contains gas under pressure; may explode if heated

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.