

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : SPU1 Spray Power Unit
Product code : SPU1

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Propellant

1.3. Details of the supplier of the safety data sheet

SIRCHIE
100 Hunter Place
Youngsville, NC 27596 - USA
T 919-554-2244; 800-356-7311 - F 919-554-2266; 800-899-8181
<http://www.sirchie.com>

1.4. Emergency telephone number

Emergency number : 1.800.424.9300
CHEMTREC: 1.800.424.9300

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Flammable gases H220
Category 1

Full text of H statements : see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS02

GHS04

Signal word (GHS-US) : Danger
Hazard statements (GHS-US) : H220 - Extremely flammable gas
H280 - Contains gas under pressure; may explode if heated
Precautionary statements (GHS-US) : 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
P403 - Store in a well-ventilated place

2.3. Other hazards

Other hazards not contributing to the classification : Contains gas under pressure; may explode if heated.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

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Name	Product identifier	%	GHS-US classification
dimethyl ether, liquefied, under pressure	(CAS No) 115-10-6	50	Flam. Gas 1, H220 Compressed gas, H280
isobutane, liquefied, under pressure	(CAS No) 75-28-5	28.5	Flam. Gas 1, H220 Compressed gas, H280
propane	(CAS No) 74-98-6	21.5	Compressed gas, H280

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

No additional information available

4.2. Most important symptoms and effects, both acute and delayed

No additional information available

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

No additional information available

5.2. Special hazards arising from the substance or mixture

Reactivity : No data available.

5.3. Advice for firefighters

No additional information available

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

No additional information available

6.3. Methods and material for containment and cleaning up

No additional information available

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

No additional information available

7.2. Conditions for safe storage, including any incompatibilities

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

dimethyl ether, liquefied, under pressure (115-10-6)

Not applicable

isobutane, liquefied, under pressure (75-28-5)

Not applicable

propane (74-98-6)

Not applicable

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8.2. Exposure controls

Personal protective equipment : Gas mask. Gloves. Safety glasses.



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Gas
Appearance	: Clear, colorless gas.
Color	: Colorless clear
Odor	: Ether-like odour
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Vapor pressure	: No data available
Relative density	: No data available
Relative vapor density at 20 °C	: No data available
Solubility	: Insoluble in water. Water: Solubility in water of component(s) of the mixture : • dimethyl ether, liquefied, under pressure: 7.0 g/100ml • isobutane, liquefied, under pressure: 0.005 g/100ml (20 °C) • propane: 0.0061 g/100ml (25 °C)
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available.

10.2. Chemical stability

Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Keep away from heat/sparks/open flames/hot surfaces. – No smoking. High temperature. High pressure. Heat. Direct sunlight.

10.5. Incompatible materials

Oxidizing agent. Strong acids. Strong bases.

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10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

dimethyl ether, liquefied, under pressure (115-10-6)	
LC50 inhalation rat (mg/l)	309 mg/l/4h (Rat; Experimental value)
LC50 inhalation rat (ppm)	164000 ppm/4h (Rat; Experimental value)
ATE US (gases)	164000.000 ppmV/4h
ATE US (vapors)	309.000 mg/l/4h
ATE US (dust, mist)	309.000 mg/l/4h

propane (74-98-6)	
ATE US (gases)	280000.000 ppmV/4h
ATE US (vapors)	513.000 mg/l/4h
ATE US (dust, mist)	513.000 mg/l/4h

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

SECTION 12: Ecological information

12.1. Toxicity

dimethyl ether, liquefied, under pressure (115-10-6)	
Threshold limit algae 1	154.9 mg/l (EC50; ECOSAR v1.00; 96 h; Algae)

isobutane, liquefied, under pressure (75-28-5)	
LC50 fish 1	9.89 mg/l (LC50; 96 h; Pimephales promelas)
EC50 Daphnia 1	10.67 mg/l (LC50; 48 h; Daphnia magna)
LC50 fish 2	27.98 mg/l (LC50; Other; 96 h; Pisces; Fresh water)
EC50 Daphnia 2	16.33 mg/l (LC50; 48 h; Daphnia sp.)
Threshold limit algae 2	7.15 mg/l (EC50; 72 h; Algae)

propane (74-98-6)	
Threshold limit algae 2	8 mg/l (IC50; 72 h; Algae)

12.2. Persistence and degradability

dimethyl ether, liquefied, under pressure (115-10-6)	
Persistence and degradability	Not readily biodegradable in water. Non degradable in the soil. Not applicable (gas).

isobutane, liquefied, under pressure (75-28-5)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Not applicable (gas).

propane (74-98-6)	
Persistence and degradability	Readily biodegradable in water. Not applicable (gas). Photodegradation in the air.

12.3. Bioaccumulative potential

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dimethyl ether, liquefied, under pressure (115-10-6)	
Log Pow	0.10 (Experimental value; 0.07; QSAR; KOWWIN; 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
isobutane, liquefied, under pressure (75-28-5)	
BCF fish 1	20 - 52 (BCF)
BCF other aquatic organisms 1	20 - 52 (BCF)
Log Pow	2.8 (Experimental value; 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
propane (74-98-6)	
BCF fish 1	9 - 25 (BCF)
Log Pow	2.28 (Calculated)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

dimethyl ether, liquefied, under pressure (115-10-6)	
Surface tension	0.020 N/m (-40 °C)
isobutane, liquefied, under pressure (75-28-5)	
Surface tension	0.014 N/m (-10 °C)
propane (74-98-6)	
Surface tension	0.016 N/m (-47 °C)

12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

No additional information available

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN1950 Aerosols, flammable (FLAMMABLE GAS), 2.1, II

UN-No.(DOT) : UN1950

Proper Shipping Name (DOT) : Aerosols, flammable
FLAMMABLE GAS

Class (DOT) : 2.1 - Class 2.1 - Flammable gas 49 CFR 173.115

Hazard labels (DOT) : 2.1 - Flammable gas



Packing group (DOT) : II - Medium Danger

Other information : No supplementary information available.

TDG

No additional information available

Transport by sea

No additional information available

Air transport

UN-No. (IATA) : UN1950

Proper Shipping Name (IATA) : Aerosols, flammable

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Class (IATA) : 2.1 - Gases : Flammable

SECTION 15: Regulatory information

15.1. US Federal regulations

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Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

No additional information available

EU-Regulations

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Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

No additional information available

15.3. US State regulations

No additional information available

SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Training advice : Normal use of this product shall imply use in accordance with the instructions on the packaging.

Other information : This Safety Data Sheet has been established in accordance with the applicable European Union legislation.

Full text of H-phrases:

H220	Extremely flammable gas
H280	Contains gas under pressure; may explode if heated

NFPA health hazard : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA fire hazard : 4 - Will rapidly or completely vaporize at normal pressure and temperature, or is readily dispersed in air and will burn readily.

NFPA reactivity : 1 - Normally stable, but can become unstable at elevated temperatures and pressures or may react with water with some release of energy, but not violently.

HMIS III Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 4 Severe Hazard - Flammable gases, or very volatile flammable liquids with flash points below 73 F, and boiling points below 100 F. Materials may ignite spontaneously with air. (Class IA)

Physical : 1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.

Personal Protection : G

G - Safety glasses, Gloves, Vapor respirator

SDS US (GHS HazCom 2012)

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