

# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

**Product name** Leafshine  
**CAS #** Mixture  
**Product Use** Misting spray  
**Manufacturer** Floralife, a division of Smithers-Oasis Company  
751 Thunderbolt Drive  
Walterboro, SC 29488 US  
Phone: 843-538-3839  
Fax: 843-538-3949  
Emergency contact: 303-623-5716 or 877-740-5015

## 2. Hazards Identification

**Emergency overview** CAUTION  
Flammable aerosol.  
Contents under pressure.  
Containers may explode when heated.  
  
MAY CAUSE SKIN IRRITATION.  
MAY CAUSE EYE IRRITATION.  
MAY CAUSE RESPIRATORY TRACT IRRITATION.

### Potential short term health effects

**Routes of exposure** Eye, Skin contact, Inhalation, Ingestion.  
**Eyes** May cause irritation.  
**Skin** May cause irritation.  
**Inhalation** Prolonged inhalation may be harmful. May cause respiratory irritation. Excessive intentional inhalation may cause respiratory tract irritation and central nervous system effects (headache, dizziness).  
**Ingestion** May cause stomach distress, nausea or vomiting.  
**Target organs** Eyes. Skin. Respiratory system.  
**Chronic effects** Prolonged or repeated exposure can cause drying, defatting and dermatitis.  
**Signs and symptoms** Symptoms may include redness, oedema, drying, defatting and cracking of the skin. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.  
**Potential environmental effects** See section 12.

## 3. Composition/Information on Ingredients

Components	CAS #	Percent
Butane	106-97-8	15 - 40
Naphtha (petroleum), hydrotreated heavy	64742-48-9	15 - 40
Propane	74-98-6	15 - 40
Oil, mineral	64742-55-8	10 - 30
Isopropanol	67-63-0	3 - 7

## 4. First Aid Measures

### First aid procedures

**Eye contact** Immediately flush with cool water. Remove contact lenses, if applicable, and continue flushing for 15 minutes. Obtain medical attention immediately.  
**Skin contact** Flush with cool water. Wash with soap and water. Obtain medical attention if irritation persists.  
**Inhalation** If symptoms develop, move victim to fresh air. If symptoms persist, obtain medical attention. If breathing has stopped, trained personnel should administer CPR immediately.

<b>Ingestion</b>	Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.
<b>Notes to physician</b>	Treat patient symptomatically.
<b>General advice</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. If you feel unwell, seek medical advice (show the label where possible). Show this safety data sheet to the doctor in attendance. Avoid contact with eyes. Wear suitable protective clothing. Keep out of reach of children. Do not puncture or incinerate container. Keep away from sources of ignition. No smoking.

## 5. Fire Fighting Measures

<b>Flammable properties</b>	Flammable by WHMIS criteria.  Containers may explode when heated. Flammable aerosol by flame projection test.
<b>Extinguishing media</b>	
<b>Suitable extinguishing media</b>	Water spray. Foam. Carbon dioxide. Water Fog.
<b>Unsuitable extinguishing media</b>	Not available
<b>Protection of firefighters</b>	
<b>Specific hazards arising from the chemical</b>	Contents under pressure. Pressurised container may explode when exposed to heat or flame. Cool containers with flooding quantities of water until well after fire is out.
<b>Protective equipment for firefighters</b>	Firefighters should wear full protective clothing including self contained breathing apparatus.
<b>Hazardous combustion products</b>	May include and are not limited to: Oxides of carbon. Oxides of nitrogen. Oxides of sulfur. Aldehydes.
<b>Explosion data</b>	
<b>Sensitivity to mechanical impact</b>	Not available.
<b>Sensitivity to static discharge</b>	Not available.

## 6. Accidental Release Measures

<b>Personal precautions</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
<b>Environmental precautions</b>	Do not discharge into lakes, streams, ponds or public waters.
<b>Methods for containment</b>	Stop leak if you can do so without risk. Use water spray to reduce vapours or divert vapour cloud drift. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Prevent entry into waterways, sewers, basements or confined areas.
<b>Methods for cleaning up</b>	Large Spills: Wet down with water and dike for later disposal. Before attempting clean up, refer to hazard data given above. Remove sources of ignition. Although the chance of a significant spill or leak is unlikely in aerosol containers, in the event of such an occurrence, absorb spilled material with a non-flammable absorbent such as sand or vermiculite. After removal flush contaminated area thoroughly with water.

## 7. Handling and Storage

<b>Handling</b>	Use only with adequate ventilation. Avoid contact with eyes. When using do not eat or drink. Wash thoroughly after handling. Use good industrial hygiene practices in handling this material. Pressurised container: Do not pierce or burn, even after use. Keep container tightly closed.
<b>Storage</b>	Protect from sunlight. Keep out of reach of children. Do not store at temperatures above 49°C (120.2°F). Keep away from heat, open flames or other sources of ignition.

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## 8. Exposure Controls/Personal Protection

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### Occupational exposure limits

#### ACGIH Biological Exposure Indices

Components	Type	Value
Isopropanol (CAS 67-63-0)	BEI	40 mg/l

#### US. ACGIH Threshold Limit Values

Components	Type	Value
Butane (CAS 106-97-8)	STEL	1000 ppm
Isopropanol (CAS 67-63-0)	STEL	400 ppm
	TWA	200 ppm

**Exposure limits** Chemicals listed in section 3 that are not listed here do not have established limit values for ACGIH.

**Engineering controls** Ensure adequate ventilation.

### Personal protective equipment

**Eye/Face protection** Wear safety glasses with side shields.

**Hand protection** Rubber gloves. Confirm with a reputable supplier first.

**Skin and body protection** As required by employer code.

**Respiratory protection** Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.

**General hygiene considerations** Wash hands and face before breaks and immediately after handling the product. Handle in accordance with good industrial hygiene and safety practices. When using do not eat or drink.

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## 9. Physical and Chemical Properties

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<b>Appearance</b>	Mist
<b>Colour</b>	Colourless
<b>Form</b>	Aerosol
<b>Odour</b>	Slight
<b>Odour threshold</b>	Not available.
<b>Physical state</b>	Gas.
<b>pH</b>	Not available.
<b>Freezing point</b>	Not available.
<b>Boiling point</b>	Not available.
<b>Pour point</b>	Not available.
<b>Evaporation rate</b>	Not available
<b>Flash point</b>	< 0.0 °C (< 32.0 °F)
<b>Auto-ignition temperature</b>	Not available.
<b>Flammability Limits in Air, Upper, % by Volume</b>	Not available.
<b>Flammability Limits in Air, Lower, % by Volume</b>	Not available.
<b>Heat of combustion</b>	Not available.
<b>Vapour pressure</b>	Not available.
<b>Vapour density</b>	Not available.
<b>Specific gravity</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Solubility (Water)</b>	Not available.
<b>Relative density</b>	Not available.
<b>Viscosity</b>	Not available.
<b>VOC</b>	Not available
<b>Percent volatile</b>	Not available

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## 10. Stability and Reactivity

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<b>Reactivity</b>	This product may react with strong oxidising agents.
<b>Possibility of hazardous reactions</b>	Hazardous polymerisation does not occur.
<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Conditions to avoid</b>	Do not mix with other chemicals. Aerosol containers are unstable at temperatures above 49°C (120.2°F).
<b>Incompatible materials</b>	Acids. Oxidizers.
<b>Hazardous decomposition products</b>	May include and are not limited to: Oxides of carbon. Oxides of nitrogen. Oxides of sulfur. Aldehydes.

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## 11. Toxicological Information

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### Toxicological data

Components	Species	Test results
Butane (CAS 106-97-8)		
<b>Acute</b>		
<i>Inhalation</i>		
LC50	Mouse	680 mg/l, 2 Hours
	Rat	276000 ppm, 4 Hours
		658 mg/l/4h
<i>Oral</i>		
LD50	Not available	
Isopropanol (CAS 67-63-0)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	12800 mg/kg
<i>Inhalation</i>		
LC50	Rat	16970 mg/l/4h
<i>Oral</i>		
LD50	Dog	4797 mg/kg
	Mouse	3600 mg/kg
	Rabbit	5030 mg/kg
	Rat	4396 mg/kg
Naphtha (petroleum), hydrotreated heavy (CAS 64742-48-9)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	3160 mg/kg
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Rat	5000 mg/kg
Oil, mineral (CAS 64742-55-8)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	2000 mg/kg
<i>Inhalation</i>		
LC50	Rat	2.2 mg/l/4h
<i>Oral</i>		
LD50	Rat	5000 mg/kg

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Components	Species	Test results
Propane (CAS 74-98-6)		
<b>Acute</b>		
<i>Inhalation</i>		
LC50	Rat	> 1442.8 mg/l, 15 Minutes
<i>Oral</i>		
LD50	Not available	

#### Effects of acute exposure

<b>Eye contact</b>	May cause irritation.
<b>Skin contact</b>	May cause irritation.
<b>Inhalation</b>	Prolonged inhalation may be harmful. May cause respiratory irritation. Excessive intentional inhalation may cause respiratory tract irritation and central nervous system effects (headache, dizziness).
<b>Ingestion</b>	May cause stomach distress, nausea or vomiting.
<b>Sensitisation</b>	Non-hazardous by WHMIS criteria.
<b>Chronic effects</b>	Non-hazardous by WHMIS criteria.
<b>Carcinogenicity</b>	Non-hazardous by WHMIS criteria.
<b>Mutagenicity</b>	Non-hazardous by WHMIS criteria.
<b>Reproductive effects</b>	Non-hazardous by WHMIS criteria.
<b>Teratogenicity</b>	Non-hazardous by WHMIS criteria.
<b>Name of Toxicologically Synergistic Products</b>	Not available.

## 12. Ecological Information

<b>Ecotoxicity</b>	See below		
<b>Ecotoxicological data</b>			
<b>Components</b>		<b>Species</b>	<b>Test results</b>
Isopropanol (CAS 67-63-0)			
Algae	IC50	Algae	1000 mg/L, 72 Hours
Crustacea	EC50	Daphnia	13299 mg/L, 48 Hours
<b>Aquatic</b>			
Fish	LC50	Bluegill ( <i>Lepomis macrochirus</i> )	> 1400 mg/l, 96 hours
Oil, mineral (CAS 64742-55-8)			
Crustacea	EC50	Daphnia	1000 mg/L, 48 Hours
<b>Persistence and degradability</b>	Not available.		
<b>Bioaccumulation/accumulation</b>	Not available		
<b>Mobility in environmental media</b>	Not available.		
<b>Environmental effects</b>	Not available.		
<b>Aquatic toxicity</b>	Not available.		
<b>Partition coefficient</b>			
Butane		2.89	
Isopropanol		0.05	
Propane		2.36	
<b>Chemical fate information</b>	Not available.		

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### 13. Disposal Considerations

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<b>Disposal instructions</b>	Dispose in accordance with all applicable regulations.
<b>Waste from residues / unused products</b>	Not available
<b>Contaminated packaging</b>	Not available

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### 14. Transport Information

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#### Transportation of Dangerous Goods (TDG - Canada)

##### Basic shipping requirements:

<b>UN number</b>	UN1950
<b>Proper shipping name</b>	Aerosols, flammable
<b>Hazard class</b>	2.1
<b>Special provisions</b>	80

#### TDG



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### 15. Regulatory Information

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**Canadian federal regulations** This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

#### Canada DSL Challenge Substances: Listed substance

Butane (CAS 106-97-8) Listed.

#### Canada NPRI VOCs with Additional Reporting Requirements: Mass reporting threshold/Identification Number

Butane (CAS 106-97-8)	1 TONNES
Isopropanol (CAS 67-63-0)	1 TONNES
Naphtha (petroleum), hydrotreated heavy (CAS 64742-48-9)	1 TONNES
Propane (CAS 74-98-6)	1 TONNES

#### Canada WHMIS Ingredient Disclosure: Threshold limits

Butane (CAS 106-97-8)	1 %
Isopropanol (CAS 67-63-0)	1 %
Oil, mineral (CAS 64742-55-8)	1 %

**WHMIS status** Controlled

**WHMIS Classification** Class A - Compressed Gas, Class B - Division 5; Flammable Aerosol, Class D - Division 2B

#### WHMIS labeling



#### Inventory status

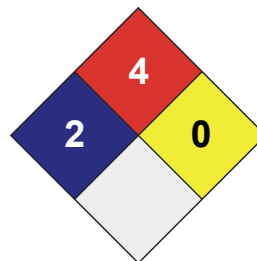
Country(s) or region	Inventory Name	On Inventory (Yes/No)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

## 16. Other Information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

HEALTH	/	2
FLAMMABILITY		4
PHYSICAL HAZARD		0
PERSONAL PROTECTION		X



### Disclaimer

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

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### Prepared by

Dell Tech Laboratories Ltd. Phone: (519) 858-5021

### Other information

For an updated MSDS, please contact the supplier/manufacturer listed on the first page of the document.

This MSDS conforms to the ANSI Z400.1/Z129.1-2010 Standard.