

## Material Safety Data Sheet

in accordance with 91/155/EEC

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**Identification of the Substance or Preparation:** *Histofreezer® Portable Cryosurgical System*

#### Company/Undertaking Identification

Manufacturer/Supplier: *OraSure Technologies, Inc. (OTI)*  
 220 East First Street  
 Bethlehem, PA 18015-1360 USA

Telephone: (610) 882-1820

Emergency Information: *INFOTRAC, INC.*

Telephone: 1-800-535-5053 (USA and Canada)  
 1-352-323-3500

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Principal Hazardous Components:	CAS #	%	Symbol(s)	R-phrases
<i>Dimethyl ether (DME)</i>	115-10-6	95	F+	12
<i>Propane</i>	74-98-6	2	F+	12
<i>Isobutane</i>	75-28-5	3	F+	12

### 3. HAZARDS IDENTIFICATION

Hazard Symbol: *F+: Extremely flammable*

Critical Hazard to Man and Environment: *R12: Extremely flammable*

### 4. FIRST AID MEASURES

First Aid Procedures:	<p><b>Eye Contact</b> – Flush eyes with lukewarm water for 15 min., consult doctor.</p> <p><b>Skin Contact</b> – Keep skin under lukewarm water for 15 min., consult doctor.</p> <p><b>Inhalation</b> – Fresh air and rest.</p> <p><b>Ingestion</b> – Not applicable.</p>
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### 5. FIRE-FIGHTING MEASURES

Extinguishing Media: *CO<sub>2</sub> Dry Chemical Foam*

Special Fire Fighting Procedures: *Take canister out of the fire zone if possible, and keep it cool.*

Unusual Fire and Explosion Hazards: *Canister can explode when heated above 50°C.*

### 6. ACCIDENTAL RELEASE MEASURES

Spill Response: *The liquefied gas will evaporate quickly. Provide ventilation. Avoid sources of ignition.*

## 7. HANDLING AND STORAGE

Handling and Storage: *Store canister in a cool, dry place. Do not expose to temperatures above 50°C or store near heat or open flame.*

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Controls:	Component Name	CAS #	TLV (Units)
	<i>DME</i>	<i>115-10-6</i>	<i>MAC 100 ppm</i>
	<i>Propane</i>	<i>74-98-6</i>	<i>MAC &gt; 600 ppm; OSHA PEL 1000 ppm</i>
	<i>Isobutane</i>	<i>75-28-5</i>	<i>800 ppm</i>
Personal Protection:	<b>Respiratory</b> - <i>Do not inhale vapors.</i> <b>Eye</b> - <i>Do not spray into eyes.</i> <b>Skin</b> - <i>Do not spray directly on to skin.</i>		

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: *Under pressure as a liquid*

Safety Relevant Data:	Boiling Point: <i>DME-25°C/propane-41°C/isobutane-12°C</i>	Specific Gravity (H <sub>2</sub> O=1.0): <i>0.625</i>
	Vapor Pressure (mmHg @ 68°F): <i>Not Available</i>	Percentage Volatile by Volume: <i>100%</i>
	Vapor Density (Air=1): <i>&gt;1</i>	pH: <i>Not Available</i>
	Solubility in Water: <i>Not Available</i>	Evaporation Rate (Butyl Acetate=1): <i>Not Available</i>
	Flash Point (Method): <i>DME -41°C (TOC)</i>	Auto Ignition Temperature: <i>DME 350°C (622°F)</i>
	Flammable Limits in Air (% by Volume): LEL: <i>dimethyl ether 3.4/propane 2.1/isobutane 1.8</i> UEL: <i>dimethyl ether 18.0/propane 9.5/isobutane 8.4</i>	

## 10. STABILITY AND REACTIVITY

Stability: *Stable*

Conditions to Avoid: *Protect from sunlight and do not expose to temperatures exceeding 50°C.*

Incompatibility (Materials to Avoid): *Strong oxidizers*

Hazardous Polymerization: *Will Not Occur*    Conditions to Avoid: *None*

Hazardous Decomposition Products: *Not applicable*

## 11. TOXICOLOGICAL INFORMATION

Threshold Limit Value: *DME 100 ppm*

Carcinogen: *No*

Effects of Exposure:

**Eye Contact** - *Freezing*  
**Skin Contact** - *Freezing*  
**Inhalation of Vapors** - *Dizzy, Headache*

## 12. ECOLOGICAL INFORMATION

*There is no data available on the preparation itself.*

### 13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: *Do not puncture or incinerate canister even after use. Comply with local, state and federal standards.*

### 14. TRANSPORT INFORMATION

*Transport only in accordance with ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport.*

Air Transport:	<b>UN Number - 1950</b> <b>Class - 2.1</b> <b>Proper Shipping Name - Aerosols, flammable</b>
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Land Transport:	<b>UN Number - 1950</b> <b>Class - 2, Number/letter 5f</b> <b>Description - Aerosols</b>
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Sea Transport:	<b>UN Number - 1950</b> <b>Class - 2.1</b> <b>Proper Shipping Name - Aerosols</b>
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### 15. REGULATORY INFORMATION

Labeling Information:	<b>Code Letter and Hazard Symbol - F+ Extremely Flammable.</b> <b>R Phrases - R12 Extremely Flammable.</b> <b>S Phrases - S2 Keep out of reach of children.</b> <b>S16 Keep away from sources of ignition. No smoking.</b> <b>S23 Do not breathe spray.</b> <b>S33 Take precautionary measures against static discharges.</b> <b>Other Phrases - Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn even after use. Do not spray on a naked flame or any incandescent material.</b>
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Legislation:	<i>EC Directive 91/155/EEC defining the laying down and detailed arrangements for the system of specific information relating to dangerous preparations.</i> <i>EC Directive 94/1/EC adapting some technicalities of Council Directive 75/324/EEC on the approximation of the laws of Member States relating to aerosol dispensers.</i>
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### 16. OTHER INFORMATION

*The information and recommendations set forth herein are taken from sources believed to be accurate as of the date hereof; however, OTI makes no warranty with respect to the accuracy of the information or the suitability of the recommendations and assumes no liability to any user thereof.*