



MATERIAL SAFETY DATA SHEET

Product Name: Isoflurane, USP

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

**Manufacturer Name
And Address** Hospira, Inc.
275 North Field Drive
Lake Forest, Illinois 60045
USA

Note: Hospira, formerly the Hospital Products Division of Abbott Laboratories, was created as an independent company in May 2004.

**Emergency Telephone
Hospira, Inc.** CHEMTREC: 800 424-9300
224 212-2055

Product Name Isoflurane, USP

Synonyms None

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient Name Isoflurane
Chemical Formula C₃H₂ClF₅O

Component	Approximate Percent by Weight	CAS Number	RTECS Number
Isoflurane	100	26675-46-2	KN6799000

3. HAZARD INFORMATION

Emergency Overview In clinical use, this material is used to produce anesthesia (sleep). Large concentrations are required to produce this effect. Smaller amounts could produce drowsiness. Possible target organs include the central nervous system, cardiovascular system, and respiratory system.

**Occupational Exposure
Potential** Information on the absorption of this compound via ingestion, inhalation or skin contact is not available. Avoid liquid aerosol generation and skin contact.

Signs and Symptoms No signs or symptoms from occupational exposure are known. Clinical data suggest the following: headaches, incoordination, nausea, slow heart rate, sedation sleep, drowsiness, dizziness, hyperthermia, vomiting, breathing difficulty.

**Medical Conditions
Aggravated by Exposure** Hypersensitivity to the material and/or similar materials. Pre-existing ailments in the following organs: central nervous system, cardiovascular system, gastrointestinal system, respiratory system.

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4. FIRST AID MEASURES

Eye Contact: Remove from source of exposure. Flush with copious amounts of water. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

Skin Contact: Remove from source of exposure. Flush with copious amounts of water. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

Inhalation: Remove from source of exposure. If signs of toxicity occur, seek medical attention. Provide symptomatic / supportive care as necessary.

Ingestion: Remove from source of exposure. If signs of toxicity occur, seek medical attention. Provide symptomatic / supportive care as necessary.

5. FIRE FIGHTING MEASURES

Flammability: Non-flammable.

Fire & Explosion Hazard: None

Extinguishing Media: Use extinguishing media appropriate for primary cause of fire.

Special Fire Fighting Procedures No special provisions required beyond normal fire fighting equipment such as flame and chemical resistant clothing and self contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Spill Cleanup and Disposal Absorb liquid with suitable material and clean affected area with soap and water. Dispose of materials according to the applicable federal, state, or local regulations.

7. HANDLING AND STORAGE

Handling Avoid contact with eyes, skin, or clothing. Wash thoroughly after handling. Do not eat, drink or smoke near material.

Storage No special storage required for hazard control. For product protection store at controlled room temperature of 15-30°C (59-86°F).

Special Precautions Protect from freezing and extreme heat.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Component	Exposure limits		
	OSHA-PEL	ACGIH-TLV	Hospira EEL
Isoflurane	8 hr TWA: Not Established	8 hr TWA: Not Established	8 hr TWA: 450 mg/m3 (60 ppm) STEL: Not Established

Notes: OSHA PEL: US Occupational Safety and Health Administration – Permissible Exposure Limit
ACGIH TLV: American Conference of Governmental Industrial Hygienists – Threshold Limit Value.
EEL: Employee Exposure Limit.
TWA: 8 hour Time Weighted Average.
STEL: 15-minute Short Term Exposure Limit.

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Respiratory Protection Respiratory protection is not needed during normal product use.

Skin Protection If solution contact with unprotected skin is likely, use of impervious gloves is a prudent practice.

Eye Protection Eye protection is not required during expected product use conditions but may be warranted should a splash potential exist.

Engineering Controls Engineering controls are not needed during normal product use conditions. Anesthetic gas scavenging systems should be used to control waste anesthetic. In the laboratory, this product should be handled in a hood.

9. PHYSICAL/CHEMICAL PROPERTIES

Appearance/Physical State Clear, colorless liquid.

Odor Mild, pungent, musty, ethereal odor

Boiling Point 48.5 °C at 760 mm Hg

Freezing Point Approximately that of water (0 °C, 32 °F).

Vapor Pressure 295 mm Hg at 25 °C

Vapor Density (Air=1) 6.3

Evaporation Rate Not Applicable

Bulk Density Not Determined

Specific Gravity 1.496 at 25 °C

Solubility Slightly soluble in water

pH Not Applicable

10. STABILITY AND REACTIVITY

Chemical Stability Stable under standard use and storage conditions.

Incompatibilities Not Determined

Hazardous Decomposition Products Toxic fumes of chlorine and fluorine under fire conditions

Hazardous Polymerization Not Determined.

11. TOXICOLOGICAL INFORMATION:

Acute Toxicity:

Ingredient(s)	Percent	Test Type	Value	Units	Species
Isoflurane	100	LD50	4770-5080	mg/kg	Mice Rats
		LC50	15,300-16,800		

LC50 is the concentration in air that produces 50% mortality.

Mutagenicity Not Determined

Target Organ Effects In clinical use target organ effects include the central nervous system.

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12. ECOLOGICAL INFORMATION:

Aquatic Toxicity Not Available

13. DISPOSAL CONSIDERATIONS:

Waste Disposal Disposal should be performed in accordance with the federal, state or local regulatory requirements.

Container Handling and Disposal Dispose of container and unused contents in accordance with federal, state, and local regulations.

14. TRANSPORTATION INFORMATION

DOT Not Regulated

Notes: DOT - US Department of Transportation Regulations

15. REGULATORY INFORMATION

TSCA Status Not Regulated
CERCLA Status Not Regulated
SARA Status Not Regulated
RCRA Status Not Regulated
PROP 65 (Calif.) Not Regulated

Notes: TSCA Toxic Substance Control Act
CERCLA, US EPA law, Comprehensive Environmental Response, Compensation, and Liability Act
SARA Superfund Amendments and Reauthorization Act
RCRA US EPA, Resource Conservation and Recovery Act
Prop 65, California Proposition 65

16. OTHER INFORMATION:

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