Baxter

Material Safety Data Sheet

MSDS Number: 1087152
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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Number: 1087152
Product name: Desflurane, USP
Product Codes: NDC 10019-641-24, NDC 10019-644-24, NDC 10019-646-24
Synonyms: Suprane
(±)1,2,2,2-tetra-fluoroethyl difluoromethyl ether
Suprane (Nova Plus)
Chemical Family: Anesthetic
Product Type: Regulated Prescription Drug
Container Information: 240 ml glass bottle
Product Use: Pharmaceutical.

Supplier
BAXTER HEALTHCARE CORPORATION
DEERFIELD, ILLINOIS 60015
(800) 422-9837 or (847) 948-4770

Emergency telephone number PROSAR: USA (888) 990-0996 OUTSIDE USA (615)917-6114
CHEMTREC: USA (800) 424-9300 OUTSIDE USA (743)741-6089

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	UN Number:	Classification:
Desflurane 57041-67-5	100	None	None

Note: May contain trace amounts of chloroform as a by-product, not more than 0.05%

3. HAZARDS IDENTIFICATION

Emergency overview: Caution! This product has reasonable odor warning properties. If personnel smell vapors, or experience dizziness or headaches, they should be moved to an area with fresh air. A dose less than that needed to produce anesthesia (approximately 6%) may result in symptoms such as dizziness.

Principle routes of exposure: Absorbed through skin. Eye contact. Ingestion. Inhalation.

Inhalation: Practically non-toxic by inhalation. Cardiovascular effects (may include fluctuations in heart rate, changes in blood pressure, chest pain). Respiratory effects (may include shortness of breath, bronchospasms, laryngospasms, respiratory depression). Gastrointestinal effects (may include nausea, upset stomach, loss of appetite). Nervous System effects (may include ataxia, tremor, disturbance of speech, lethargy, headache, dizziness, blurred vision).

Ingestion: No specific hazards other than therapeutic effects. See inhalation.

Skin contact: May cause skin irritation.

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3. HAZARDS IDENTIFICATION

Eye contact: May cause eye irritation.

4. FIRST AID MEASURES

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Skin contact: In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if irritation develops.

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately.

Eye contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation develops.

Notes to physician: See patient package insert in shipping carton for complete information.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media: Use foam or all purpose dry chemicals to extinguish.
Special protective equipment for firefighters: Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.
Specific methods: No information available
Flash point: Not determined
Autoignition temperature: Not available.
Flammable limits in air-lower (%): 17.8% (100% O2)
Flammable limits in air-upper (%): Not available.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Depending on local ventilation, clean-up crews may need to wear a chemical cartridge respirator, with a cartridge for organic vapors. Use suitable protective equipment (Section 8). Follow all fire fighting procedures (Section 5).

Environmental precautions: No information available.

Methods for cleaning up: In the event that a glass bottle breaks, but the packaging protective outer liner is not penetrated, it will expand into a ball due to the vapor pressure of Suprane® and to contain the spill. Small volumes of liquid anesthetic agents may evaporate readily at normal room temperatures, and may dissipate before any clean up attempts are initiated. For large spills, one or more bottles break, ensure adequate ventilation or evacuate area. Large volumes of anesthetic agents may cause sedative effects. Large spills should be absorbed using a sorbent that is designed for clean up of organic chemicals. Spill pillows, vermiculite, and carbon-based sorbents are some suitable materials. Restrict persons not wearing protective equipment from areas of spills or leaks until clean up is complete. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Handling:
Technical measures/precautions: Wash thoroughly after handling.

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7. HANDLING AND STORAGE

Storage:

Technical measures /Storage conditions: Keep container tightly closed. Keep in a dry, cool and well-ventilated place. Store between 15-30°C (59 to 86°F).

Incompatible products: No special restrictions on storage with other products.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Component	OSHA- Time Weighted Average:	OSHA- Short Term Exposure Limit:	OSHA- Ceiling Limits	ACGIH- Time Weighted Average:	ACGIH- Short Term Exposure Limit:	ACGIH- Ceiling Limit Value:
Desflurane 57041-67-5	None	None	None	None	None	None

NIOSH REL: Ceiling 2 ppm (60 minutes) recommended exposure limit for halogenated waste anesthetic gas.

Engineering measures: Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. Well designed and maintained scavenging system on the anesthesia equipment (combined with a good general room ventilation) is important in limiting the exposures of all personnel.

Personal protective equipment:

Respiratory protection: Personal respiratory protection equipment not typically required if engineering controls are in place. If exposure levels may exceed regulatory limits, implement a respiratory protection program including respiratory protection that is in compliance with OSHA 29 CFR1910.134 (in the US) or equivalent regulation in other regions.

Hand protection: Use chemical resistant, impervious gloves.

Skin and body protection: Work uniform or laboratory coat. Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, disposable suits).

Eye protection: Eye protection not required for normal final product use. Safety glasses with side-shields are recommended for laboratory and manufacturing use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid
Appearance: Aqueous solution
Color: Colorless
Odor: Pungent.
pH: Not applicable.
Molecular weight: 168.04 g/mole
Boiling point/range: 22.8°C (73°F)
Melting point/range: Not available.
Density: 1.465 g/cm3 at 20°C (68°F)
Vapor pressure: 669 mmHg @ 20°C
Evaporation rate: Not available.
Solubility: 0.275% in water.
Partition coefficient (n-octanol/water): Not available.
Viscosity: Not available.
% Volatile by Volume: 100% (w/w)

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10. STABILITY AND REACTIVITY

Stability: Stable under recommended storage conditions.

Polymerization: Not applicable

Hazardous decomposition products: These products are halogenated compounds (hydrochloric and hydroflouric acids).

Materials to avoid: Peroxides. Soda lime.

11. TOXICOLOGICAL INFORMATION

Component	LD50 Dermal	LC50 Inhalation	LD50 Oral
Desflurane 57041-67-5	-	-	-

Acute toxicity: Cardiovascular effects (may include fluctuations in heart rate, changes in blood pressure, chest pain). Respiratory effects (may include shortness of breath, bronchospasms, laryngospasms, respiratory depression). Gastrointestinal effects (may include nausea, upset stomach, loss of appetite). Nervous System effects (may include ataxia, tremor, disturbance of speech, lethargy, headache, dizziness, blurred vision).

Chronic toxicity: Target Organs: Nervous system. Heart. Liver.

Carcinogenic effects: Not classified or listed by IARC, NTP, OSHA, EU and ACGIH. No data is available on the product itself.

Mutagenic effects: Not mutagenic in a standard battery of genetic toxicological tests.

Reproductive toxicity: Teratogenic at maternally toxic doses. Epidemiological studies suggest higher than normal incidences of problem pregnancies (particularly spontaneous abortions) among exposed personnel.

FDA Pregnancy Catagory B

12. ECOLOGICAL INFORMATION

Environmental properties:

Component	Ecotoxicity - Water Flea Data	Fish Species Ecotoxicity	Ecotoxicity - Freshwater Algae Data	Ecotoxicity - Microtox Data
Desflurane 57041-67-5	None.	None.	None.	None.

Ecotoxicity effects: No data available

Bioaccumulation: No data available

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13. DISPOSAL CONSIDERATIONS

Waste Classification: Hazardous waste. D022.

Waste from residues / unused products: In accordance with local and national regulations.

14. TRANSPORT INFORMATION

DOT:

DOT shipping name: Aviation regulated liquid n.o.s. (desflurane)
UN Number: UN3334
DOT Packing Group: III
DOT Hazard class: 9

TDG (Canada):

TDG Proper shipping name: Not Available.
TDG UN/NA Number: Not Available.
TDG Packing Group: Not Available.
TDG Hazard class: Not Available.

ADR/RID:

ADR Official Transport Name: Not Available.
ADR Proper shipping name: Not Available.
ADR UN/NA number: Not Available.
ADR Hazard Class: Not Available.

ICAO / IATA:

IATA Proper shipping name: Aviation regulated liquid n.o.s (desflurane)
IATA UN Number: UN3334
IATA Primary Hazard: 9
IATA Packing group: III
ICAO ERG Code: None

IMO / IMDG:

IMDG Proper Shipping Name: Not Available.
IMDG Hazard Class and Division: Not Available.
IMDG Packing Group: Not Available.
IMDG Subsidiary Risks: Not Available.

15. REGULATORY INFORMATION

U.S. Regulations:

TSCA Inventory List - The product is exempt from TSCA, it is FDA Regulated

OTHER REGULATIONS:

Japanese Inventory (ENCS) This product does not comply with JPENCS

Component	Weight %	RCRA Status:	CERCLA Reportable Quantity:	CERCLA/SARA - 302 Ext. haz. substances:	Listed as Sara 313 title III:
Desflurane	100	Not Listed	Not Listed	Not Listed	Not Listed

STATE REGULATIONS:

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Component	California Prop. 65	Minnesota Right-To - Know:	Florida Right-to-Know Reporting List:	Rhode Island Right-to-Know List:	Massachusetts Right-to-Know List:	Pennsylvania Right-to-Know:	New Jersey Right-to-Know:
Desflurane	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed

CANADIAN REGULATIONS:

Canada DSL Inventory List - This product does not comply with DSL

EU EINECS List - This product does not comply with EINECS

Risk Phrases:
NONE

Safety Phrases:
NONE

16. OTHER INFORMATION

This data sheet contains changes from the previous version in section(s)?:
New MSDS format. Additional product codes. Change to emergency overview. Changes to Section 14. Changes to Section 9.

Additional information:
Refer to the OSHA "Anesthetic Gases: Guidelines For Workplace Exposures" for additional information.
http://www.osha.gov/dts/osta/anestheticgases/index.html#G

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End of safety data sheet:

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