



Material Safety Data Sheet

12601 Twinbrook Parkway,
Rockville, MD 20852 USA

Phone Calls: 301-816-8129
8 a.m. to 5 p.m. EST Mon. - Fri.

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PERFLUBRON

Catalog Number: 1510801

Revision Date:

August 15, 2006

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

Common Name: Perflubron

Manufacturer: U. S. Pharmacopeia

Responsible Party: Reference Standards Technical Services

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Product Use: USP Reference Standards and Authentic Substances are used for chemical tests and assays in analytical, clinical, pharmaceutical, and research laboratories.

SECTION 2 - HAZARD INFORMATION

Adverse Effects: Adverse effects may include abdominal fullness, diarrhea, nausea, vomiting, oily taste, abdominal pain, flatulence, and rectal leakage of solution. Possible allergic reaction to material if inhaled, ingested, or in contact with skin.

Overdose Effects: The symptoms of overdose are expected to be the same as the adverse effects listed above.

Acute: Possible eye, skin, gastrointestinal, and/or respiratory tract irritation.

Chronic: Possible hypersensitization.

Medical Conditions Aggravated by Exposure: Hypersensitivity to material and/or contrast agents, thrombocytopenia, liver disease, and gastrointestinal disorders.

Cross Sensitivity: n/f

Target Organs: n/f

For additional information on toxicity, see Section 11.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

Common Name: Perflubron

Formula: C₈BrF₁₇

Synonym: Perfluorooctylbromide

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Chemical Name: Octane, 1-bromo-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptafluoro-

CAS: 423-55-2

RTECS Number: RG8700000

Chemical Family: Perfluorinated alkane derivative

Therapeutic Category: Diagnostic aid, radiopaque, blood substitute

Composition: Pure Material

SECTION 4 - FIRST AID MEASURES

Inhalation: May cause irritation. Remove to fresh air.

Eye: May cause irritation. Flush with copious quantities of water.

Skin: May cause irritation. Flush with copious quantities of water.

Ingestion: May cause irritation. Flush out mouth with water. This material is poorly absorbed from the gastrointestinal tract and is eliminated from the body within 30 minutes of ingestion.

General First Aid Procedures: Remove from exposure. Remove contaminated clothing. Persons developing serious hypersensitivity (anaphylactic) reactions must receive immediate medical attention. If person is not breathing, give artificial respiration. If breathing is difficult, give oxygen. Obtain medical attention.

Note to Physicians

Overdose Treatment: For current information about the treatment of overdose, consult a certified Regional Poison Control Center by calling the number listed in your local telephone directory.

SECTION 5 - FIREFIGHTING MEASURES

Extinguisher Media: Water spray, dry chemical, carbon dioxide, or foam as appropriate for surrounding fire and materials.

Fire and Explosion Hazards: This material is assumed to be combustible.

Firefighting Procedures: As with all fires, evacuate personnel to a safe area. Firefighters should use self-contained breathing equipment and protective clothing.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Spill Response: Wear approved respiratory protection, chemically compatible gloves, and protective clothing. Wipe up spillage or collect spillage using a high-efficiency vacuum cleaner. Avoid breathing vapor. Ventilate area and wash spill site. Place spillage in appropriately labeled container for disposal.

SECTION 7 - HANDLING AND STORAGE

Handling: As a general rule, when handling USP Reference Standards, avoid all contact and inhalation of dust, mists, and/or vapors associated with the material. Wash thoroughly after handling.

Storage: Store in tight, light-resistant container as defined in the USP-NF. This material should be handled and stored per label instructions to ensure product integrity.

SECTION 8 - EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering Controls: Engineering controls such as exhaust ventilation are recommended.

Respiratory Protection: Use a NIOSH-approved respirator, if it is determined to be necessary by an industrial hygiene survey involving air monitoring. In the event that a respirator is not required, an approved dust mask should be used.

Gloves: Chemically compatible

Eye Protection: Safety glasses or goggles

Protective Clothing: Protect exposed skin.

Exposure Limits: n/f

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Properties as indicated on the MSDS are general and not necessarily specific to the USP Reference Standard Lot provided.**Appearance and Odor:** Clear, colorless liquid; practically odorless.**Odor Threshold:** n/f**pH:** n/f**Melting Range:** 7.2° C**Boiling Point:** 141° C**Flash Point:** n/f**Autoignition Temperature:** n/f**Evaporation Rate:** n/f**Upper Flammability Limit:** n/f**Lower Flammability Limit:** n/f**Vapor Pressure:** 6.8 mm Hg @ 20° C**Vapor Density:** n/f**Specific Gravity:** 1.94**Solubility in Water:** Insoluble**Fat Solubility:** n/f**Other Solubility:** n/f**Partition Coefficient: n-octanol/water:** n/f**Percent Volatile:** n/f**Reactivity in Water:** n/f**Explosive Properties:** n/f**Oxidizing Properties:** n/f**Formula:** C₈BrF₁₇**Molecular Weight:** 498.96

SECTION 10 - STABILITY AND REACTIVITY**Conditions to Avoid:** Avoid exposure to light.**Incompatibilities:** Strong oxidizers, strong alkalis, alkaline earth metals, sodium potassium, and finely powdered metals.**Decomposition Products:** When heated to decomposition, material emits toxic fumes of HF and HBr. Emits toxic fumes under fire conditions.**Stable?** Yes **Hazardous Polymerization?** No**SECTION 11 - TOXICOLOGICAL PROPERTIES****Oral Rat:** LD50: n/f**Oral Mouse:** LD50: n/f**Other Toxicity Data:** n/f**Irritancy Data:** n/f**Corrosivity:** n/f**Sensitization Data:** n/f**Listed as a Carcinogen by:** **NTP:** No **IARC:** No **OSHA:** No**Other Carcinogenicity Data:** No**Mutagenicity Data:** In the Ames test, in a chromosome aberration study conducted in cultured human lymphocytes, and in a mouse micronucleus assay in vivo, perflubron was not shown to cause mutagenesis.**Reproductive and Developmental Effects:** n/f**SECTION 12 - ECOLOGICAL INFORMATION****Ecological Information:** n/f**SECTION 13 - DISPOSAL CONSIDERATIONS****Disposal:** Dispose of waste in accordance with all applicable Federal, State, and local laws.**SECTION 14 - TRANSPORT INFORMATION****Shipping Name:** n/f**Class:** n/f**UN Number:** n/f**Packing Group:** n/f**Additional Transport Information:** n/f**SECTION 15 - REGULATORY INFORMATION****U.S. Regulatory Information:** n/f**International Regulatory Information:** EINECS#: 207-028-4
Hazard code: Xi**SECTION 16 - OTHER INFORMATION****Revision:** 15-Aug-06

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03-Jun-03