



MATERIAL SAFETY DATA SHEET

IDENTITY: 3-(BICYCLO[2.2.1]HEPT-5EN-2-YL)-1,1,1-TRIFLUORO-2-TRIFLUORO-METHYLPROPAN-2-OL (ALSO KNOWN AS HEXAFLUOROISOPROPOXYMETHLY-NORBORNENE (HFIPNB))

SECTION I: MANUFACTURER

HALOCARBON PRODUCTS CORPORATION      Emergency Number:                    (803) 278-3504  
P.O. Box 661                                    Customer Service & Sales: (201) 262-8899  
River Edge, N.J.      07661

Prepared by: Dr. Neville P. Pavri

SECTION II: HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components	CAS No.	OSHA PEL	ACGIH TLV	Other Limits
3-(Bicyclo[2.2.1]hept-5en-2-yl)-1,1,1-trifluoro-2-trifluoromethylpropan-2-ol	196314-61-1	None	None	None

OSHA HAZARD RATING:

This product contains the following toxic chemical(s) subject to Section 313 Title III reporting requirements (40 CFR Part 372).

None

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point : >200C @ atmospheric pressure      Vapor Pressure: 27 mm Hg at 97C  
Melting Point : Not determined      Vapor Density(Air=1): >1  
Specific Gravity(H2O=1): 1.3 g/mL      Solubility in Water : Insoluble

Appearance and Odor: Clear to yellow liquid with a pungent odor.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point/Method: 80C/Closed Cup      Autoignition Temp: Not determined  
Flammability Limits in Air - LEL: N/A      UEL: N/A

Extinguishing Media: Carbon dioxide, regular dry chemical. Use methods appropriate for surroundings.

Special Fire Fighting Procedures: Wear self-contained breathing apparatus and full bunker turnout gear in a sustained fire. Wear protective clothing to prevent contact with skin or eyes.

Unusual Fire and Explosion Hazards: This material is a NFPA Level IIIA combustible liquid. Thermal decomposition products are corrosive and toxic. Hot vapor or mist may be susceptible to spontaneous combustion when mixed with air.

## =====

SECTION V - REACTIVITY DATA

Unstable [ ] Conditions to Avoid: Protect from physical damage and  
Stable [X] heat.  
Material may form explosive peroxides on long term exposure to air.

Incompatibility (Materials to Avoid): Oxidizing agents, reducing agents.

Hazardous Combustion or Decomposition Products: Includes toxic fumes of  
carbon dioxide, carbon monoxide, hydrogen fluoride.

Hazardous Polymerization [ ] May Occur [X] Will Not Occur  
Conditions To Avoid: N/A

## =====

SECTION VI - HEALTH HAZARD DATA

To the best of our knowledge physical properties, health hazards and  
toxicological properties of this product have not been thoroughly investi-  
gated.

Material is very destructive to tissue of the mucous membrane and upper  
respiratory tract. It can cause burns and skin irritation. Acute exposure  
may cause nose, throat and lung irritation. It is a severe lachrymator.  
Exposure to eyes in the case of other fluorinated alcohols such as HFIP has  
been known to cause blindness and eye corrosion with corneal and con-  
junctival ulceration.

Acute oral toxicity in rat: LD50: 300-500 mg/kg  
Acute dermal toxicity in rabbit: tests showed dermal corrosion, slight  
edema, scabbing and scar tissue, pale green colored dermal necrosis.  
Material is classified as corrosive and causes burns.

Primary routes of entry: [X] Inhalation [X] Skin [X] Eyes [ ] Oral

Carcinogenicity listing: [No] NTP [No] IARC [No] OSHA  
[No] Other:

First Aid

Inhalation: Remove to fresh air and give artificial respiration if  
necessary. Seek immediate medical attention.

Skin: Wash affected area immediately for 15 minutes. Remove con-  
taminated clothing and shoes. Seek medical attention.

Eye: Flush eyes with plenty of water for at least 15 minutes. Get  
immediate medical help.

Oral: If swallowed get medical attention.

Medical Conditions Generally Aggravated by Exposure: No information  
available.

Other Health Hazards: Chronic respiratory and skin conditions may worsen  
from exposure to this product.

=====  
SECTION VII - PROTECTION INFORMATION

Respiratory: Respiratory protection will be needed. Self-contained breathing apparatus for emergency use.

Ventilation: Provide local exhaust or process enclosure ventilation system.

Eye Protection: Safety glasses or goggles and a face shield.

Gloves: Wear appropriate chemical resistant gloves.

=====  
SECTION VIII - SPILL, LEAK AND DISPOSAL PROCEDURES

Spill, Leak, or Release: Wear self-contained breathing apparatus and appropriate shoes and gloves. It is a combustible liquid. Eliminate all sources of ignition. Isolate hazard area. Deny access to people not involved in the cleanup. If spilled, evacuate area, absorb with inert material, pick up and place in appropriate closed container. Hold for disposal. Ventilate area and wash spill site after pickup is complete.

Waste Disposal: Dispose in accordance with all federal, state and local regulations.

=====  
SECTION IX - OTHER INFORMATION

## 1. Hazardous Materials/Dangerous Goods Shipping Regulations

U.S. (49CFR): Proper Shipping Name: Corrosive liquids, N.O.S. (Hexafluoroisopropanol norbornene)

Hazard Class: 8 ID No.: UN 1760

Packaging Group: III

IATA: Proper Shipping Name: Corrosive liquids, N.O.S. (Hexafluoroisopropanol norbornene)

Hazard Class: 8 ID No.: UN 1760

Packaging Group: III

IMDG: Proper Shipping Name: Corrosive liquids, N.O.S. (Hexafluoroisopropanol norbornene)

Hazard Class: 8 ID No.: UN 1760

Packaging Group: III

## 2. Other Information

HMIS Labeling Information: H 3; F 2; R 1; P K