

**1,1,1,3,3,3-HEXAFLUORO 2-  
PROPANOL  
CAS NO 920-66-1**

**MATERIAL SAFETY DATA SHEET  
SDS/MSDS**

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

**1.1 Product identifiers**

Product name : 1,1,1,3,3,3-Hexafluoro 2-Propanol

CAS-No. : 920-66-1

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

Identified uses : Laboratory chemicals, Industrial & for professional use only.

**1.3 Details of the supplier of the safety data sheet**

Company : Central Drug House (P) Ltd  
7/28 Vardaan House  
New Delhi -110002  
INDIA

Telephone : +91 11 49404040

Email : [care@cdhfinechemical.com](mailto:care@cdhfinechemical.com)

**1.4 Emergency telephone number**

Emergency Phone # : +91 11 49404040 (9:00am - 6:00 pm) [Office hours]

**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

**Classification according to Regulation (EC) No 1272/2008**

Acute toxicity, Oral (Category 4), H302

Skin corrosion (Category 1B), H314

Reproductive toxicity (Category 2), H361

For the full text of the H-Statements mentioned in this Section, see Section 16.

**2.2 Label elements**

**Labelling according Regulation (EC) No 1272/2008**

Pictogram



Signal word

Danger

Hazard statement(s)

H302

Harmful if swallowed.

H314

Causes severe skin burns and eye damage.

H361

Suspected of damaging fertility or the unborn child.

Precautionary statement(s)	
P260	Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P312 + P330	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Supplemental Hazard Statements	none

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Synonyms : HFP  
Hexafluoroisopropanol

Formula : C<sub>3</sub>H<sub>2</sub>F<sub>6</sub>O  
Molecular weight : 168.04 g/mol  
CAS-No. : 920-66-1  
EC-No. : 213-059-4

#### Hazardous ingredients according to Regulation (EC) No 1272/2008

Component		Classification	Concentration
<b>1,1,1,3,3,3-Hexafluoroisopropan-2-ol</b>			
CAS-No.	920-66-1	Acute Tox. 4; Skin Corr. 1B;	<= 100 %
EC-No.	213-059-4	Repr. 2; H302, H314, H361	

For the full text of the H-Statements mentioned in this Section, see Section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

#### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### **4.2 Most important symptoms and effects, both acute and delayed**

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

#### **4.3 Indication of any immediate medical attention and special treatment needed**

No data available

### **SECTION 5: Firefighting measures**

#### **5.1 Extinguishing media**

##### **Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### **5.2 Special hazards arising from the substance or mixture**

Carbon oxides, Hydrogen fluoride

#### **5.3 Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

#### **5.4 Further information**

No data available

### **SECTION 6: Accidental release measures**

#### **6.1 Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.

#### **6.2 Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

#### **6.3 Methods and materials for containment and cleaning up**

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

#### **6.4 Reference to other sections**

For disposal see section 13.

### **SECTION 7: Handling and storage**

#### **7.1 Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. For precautions see section 2.2.

#### **7.2 Conditions for safe storage, including any incompatibilities**

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Storage class (TRGS 510): Non-combustible, corrosive hazardous materials

#### **7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

### **SECTION 8: Exposure controls/personal protection**

#### **8.1 Control parameters**

#### **8.2 Exposure controls**

##### **Appropriate engineering controls**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

## Personal protective equipment

### Eye/face protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

### Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engine protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

### Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

a) Appearance	Form: clear, liquid Colour: colourless
b) Odour	No data available
c) Odour Threshold	No data available
d) pH	No data available
e) Melting point/freezing point	Melting point/range: -4 °C - lit.
f) Initial boiling point and boiling range	59 °C - lit.
g) Flash point	No data available
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapour pressure	120 mmHg at 20 °C
l) Vapour density	No data available
m) Relative density	1.596 g/cm <sup>3</sup> at 25 °C
n) Water solubility	No data available
o) Partition coefficient: n-octanol/water	No data available
p) Auto-ignition temperature	No data available

- |                              |                   |
|------------------------------|-------------------|
| q) Decomposition temperature | No data available |
| r) Viscosity                 | No data available |
| s) Explosive properties      | No data available |
| t) Oxidizing properties      | No data available |

## 9.2 Other safety information

No data available

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

No data available

### 10.5 Incompatible materials

Strong oxidizing agents, Strong acids, Strong bases, Aluminum, Zinc, Alkali metals

### 10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen fluoride

Other decomposition products - No data available

In the event of fire: see section 5

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - 1,500 mg/kg(1,1,1,3,3,3-Hexafluoropropan-2-ol)

LC50 Inhalation - Rat - 4 h - 1,974 mg/l(1,1,1,3,3,3-Hexafluoropropan-2-ol)

Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Mydriasis (pupillary dilation). Lungs, Thorax, or Respiration:Dyspnea. Blood:Other changes.

#### Skin corrosion/irritation

No data available(1,1,1,3,3,3-Hexafluoropropan-2-ol)

#### Serious eye damage/eye irritation

No data available(1,1,1,3,3,3-Hexafluoropropan-2-ol)

#### Respiratory or skin sensitisation

No data available(1,1,1,3,3,3-Hexafluoropropan-2-ol)

#### Germ cell mutagenicity

reverse mutation assay(1,1,1,3,3,3-Hexafluoropropan-2-ol) Salmonella typhimurium

Result: negative

#### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

#### Reproductive toxicity

Suspected human reproductive toxicant(1,1,1,3,3,3-Hexafluoropropan-2-ol)

**Specific target organ toxicity - single exposure**

No data available(1,1,1,3,3,3-Hexafluoropropan-2-ol)

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available(1,1,1,3,3,3-Hexafluoropropan-2-ol)

**Additional Information**

Repeated dose toxicity - Rat - male and female - Oral - No observed adverse effect level - 60

mg/kg(1,1,1,3,3,3-Hexafluoropropan-2-ol)

RTECS: UB6450000

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea(1,1,1,3,3,3-Hexafluoropropan-2-ol)

**SECTION 12: Ecological information****12.1 Toxicity**

Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 244 mg/l - 96 h(1,1,1,3,3,3-Hexafluoropropan-2-ol)

**12.2 Persistence and degradability**

Biodegradability aerobic - Exposure time 28 d(1,1,1,3,3,3-Hexafluoropropan-2-ol)  
Result: 0 - 5 % - Not readily biodegradable.  
(OECD Test Guideline 301C)

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available(1,1,1,3,3,3-Hexafluoropropan-2-ol)

**12.5 Results of PBT and vPvB assessment**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**12.6 Other adverse effects**

No data available

**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Product**

Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging**

Dispose of as unused product.

**SECTION 14: Transport information****14.1 UN number**

ADR/RID: 3265

MDG: 3265

IATA: 3265

**14.2 UN proper shipping name**

ADR/RID: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (1,1,1,3,3,3-Hexafluoropropan-2-ol)

IMDG: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (1,1,1,3,3,3-Hexafluoropropan-2-ol)

IATA: Corrosive liquid, acidic, organic, n.o.s. (1,1,1,3,3,3-Hexafluoropropan-2-ol)

<b>14.3 Transport hazard class(es)</b>			
ADR/RID: 8	IMDG: 8		IATA: 8
<b>14.4 Packaging group</b>			
ADR/RID: II	IMDG: II		IATA: II
<b>14.5 Environmental hazards</b>			
ADR/RID: no	IMDG Marine pollutant: no		IATA: no
<b>14.6 Special precautions for user</b>			
No data available			

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

### 15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

## SECTION 16: Other information

### Full text of H-Statements referred to under sections 2 and 3.

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H361	Suspected of damaging fertility or the unborn child.

### Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Central Drug House (P) Ltd and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.cdhfinechemical.com](http://www.cdhfinechemical.com) for additional terms and conditions of sale.