

**SAFETY DATA SHEET**  
HEXAFLUOROCYCLOBUTENE

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**1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING**

**Product name:** HEXAFLUOROCYCLOBUTENE  
**CAS number:** 697-11-0  
**Product code:** PC4671  
**Company name:** Apollo Scientific Ltd  
Bredbury, Stockport, SK6 2QR, Tel 0161 406 0505

**2. HAZARDS IDENTIFICATION**

**Main hazards:** Toxic by inhalation and if swallowed.

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

**Hazardous ingredients:** HEXAFLUOROCYCLOBUTENE >90%

**4. FIRST AID MEASURES (SYMPTOMS)**

**Skin contact:** There may be irritation and redness at the site of contact.  
**Eye contact:** There may be pain and redness.  
**Ingestion:** There may be soreness and redness of the mouth and throat. There may be vomiting. Convulsions may occur. There may be loss of consciousness.  
**Inhalation:** There may be shortness of breath with a burning sensation in the throat. Absorption through the lungs can occur causing symptoms similar to those of ingestion.

**4. FIRST AID MEASURES (ACTION)**

**Skin contact:** Remove all contaminated clothes and footwear immediately unless stuck to skin. Wash immediately with plenty of soap and water.  
**Eye contact:** Bathe the eye with running water for 15 minutes. Consult a doctor.  
**Ingestion:** Wash out mouth with water. If conscious, give half a litre of water to drink immediately. If unconscious, check for breathing and apply artificial respiration if necessary. If unconscious and breathing is OK, place in the recovery position. Transfer to hospital as soon as possible.  
**Inhalation:** Remove casualty from exposure ensuring one's own safety whilst doing so. Transfer to hospital as soon as possible.

**5. FIRE-FIGHTING MEASURES**

**Extinguishing media:** Suitable extinguishing media for the surrounding fire should be used. Carbon dioxide. Dry chemical powder.  
**Exposure hazards:** Toxic. In combustion emits toxic fumes.  
**Protection of fire-fighters:** Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

[cont...]

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**Personal precautions:** Notify the police and fire brigade immediately. If outside keep bystanders upwind and away from danger point. Mark out the contaminated area with signs and prevent access to unauthorised personnel. Do not attempt to take action without suitable protective clothing - see section 8 of SDS.

**Environmental precautions:** Take precautions to ensure product does not contaminate the ground or enter the drainage system.

**Clean-up procedures:** Clean-up should be dealt with only by qualified personnel familiar with the specific substance. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

**7. HANDLING AND STORAGE**

**Handling requirements:** Avoid direct contact with the substance. Avoid the formation or spread of mists in the air. Ensure there is sufficient ventilation of the area. Only use in fume hood.

**Storage conditions:** Store in cool, well ventilated area. Keep container tightly closed.

**Suitable packaging:** Must only be kept in original packaging.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Engineering measures:** Ensure there is sufficient ventilation of the area.

**Respiratory protection:** Self-contained breathing apparatus must be available in case of emergency.

**Hand protection:** Protective gloves.

**Eye protection:** Safety glasses. Ensure eye bath is to hand.

**Skin protection:** Protective clothing.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**State:** Gas

**Boiling point/range°C:** 5-6

**Melting point/range°C:** -60

**10. STABILITY AND REACTIVITY**

**Stability:** Stable under normal conditions.

**Conditions to avoid:** Heat.

**Materials to avoid:** Strong oxidising agents. Strong acids.

**Haz. decomp. products:** In combustion emits toxic fumes.

**11. TOXICOLOGICAL INFORMATION**

**Chronic toxicity:** MAY BE HARMFUL BY INHALATION, INGESTION, OR SKIN ABSORPTION.

**Routes of exposure:** Refer to section 4 of SDS for routes of exposure and corresponding symptoms.

**12. ECOLOGICAL INFORMATION****Mobility:** Data not yet known**Persistence and degradability:** No data available.**Bioaccumulative potential:** No data available.**Other adverse effects:** Data not known**13. DISPOSAL CONSIDERATIONS****Disposal operations:** MATERIAL SHOULD BE DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS**Disposal of packaging:** Dispose of as special waste in compliance with local and national regulations Observe all federal, state and local environmental regulations.**NB:** The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.**14. TRANSPORT INFORMATION****ADR / RID****UN no:** 1955**ADR Class:** 2**Classification code:** 1T**Shipping name:** COMPRESSED GAS, TOXIC, N.O.S.**Labelling:** 2.3**Hazard ID no:** 26**IMDG / IMO****UN no:** 1955**Class:** 2.3**EmS:** F-C,S-U**Marine pollutant:** .**Labelling:** 2.3**IATA / ICAO****UN no:** 1955**Class:** 2**Packing instructions:** FORBIDDEN**Labelling:** 2.3**15. REGULATORY INFORMATION****Hazard symbols:** Toxic.

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**Risk phrases:** R23/25: Toxic by inhalation and if swallowed.

**Safety phrases:** S36/37/39: Wear suitable protective clothing, gloves and eye / face protection.

S38: In case of insufficient ventilation, wear suitable respiratory equipment.

S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**Note:** The regulatory information given above only indicates the principal regulations specifically applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

#### 16. OTHER INFORMATION

**Legal disclaimer:** The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.