

SAFETY DATA SHEET
1,1,1,4,4,4-HEXAFLUOROBUTANE

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Issued: 14/07/2008
Revision No: 1

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

Product name: 1,1,1,4,4,4-HEXAFLUOROBUTANE
CAS number: 407-59-0
Product code: PC4652
Company name: Apollo Scientific Ltd
Bredbury, Stockport, SK6 2QR, Tel 0161 406 0505

2. HAZARDS IDENTIFICATION

Main hazards: Flammable.
Other hazards: In use, may form flammable / explosive vapour-air mixture.

3. COMPOSITION / INFORMATION ON INGREDIENTS

4. FIRST AID MEASURES (SYMPTOMS)

Skin contact: There may be mild irritation at the site of contact.
Eye contact: There may be irritation and redness.
Ingestion: There may be irritation of the throat.
Inhalation: No symptoms.

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.
Ingestion: Wash out mouth with water.
Inhalation: Consult a doctor.

5. FIRE-FIGHTING MEASURES

Extinguishing media: Suitable extinguishing media for the surrounding fire should be used. Alcohol resistant foam. Carbon dioxide. Dry chemical powder.
Exposure hazards: Flammable. In combustion emits toxic fumes. Forms explosive air-vapour mixture.
Protection of fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Refer to section 8 of SDS for personal protection details. Notify the police and fire brigade immediately. Eliminate all sources of ignition. Turn leaking containers leak-side up to prevent the escape of liquid.
Environmental precautions: Do not discharge into drains or rivers. Contain the spillage using bunding.
Clean-up procedures: Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method. Do not use equipment in clean-up procedure which may produce sparks.

[cont...]

7. HANDLING AND STORAGE

Handling requirements: Smoking is forbidden. Use non-sparking tools. Ensure there is sufficient ventilation of the area. Avoid the formation or spread of mists in the air. Only use in fume hood.

Storage conditions: Store in cool, well ventilated area. Keep container tightly closed. Keep away from sources of ignition. Prevent the build up of electrostatic charge in the immediate area. Ensure lighting and electrical equipment are not a source of ignition.

Suitable packaging: Must only be kept in original packaging.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures: Ensure there is sufficient ventilation of the area. Ensure lighting and electrical equipment are not a source of ignition.

Respiratory protection: Respiratory protection not required.

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

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions. Stable at room temperature.

Conditions to avoid: Heat. Hot surfaces. Sources of ignition. Flames.

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.

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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: 3161 **ADR Class:** 2
Classification code: 2F
Shipping name: LIQUEFIED GAS, FLAMMABLE, N.O.S.
Labelling: 2.1 **Hazard ID no:** 23

**IMDG / IMO**

UN no: 3161 **Class:** 2.1
EmS: F-D,S-U **Marine pollutant:** .
Labelling: 2.1

IATA / ICAO

UN no: 3161 **Class:** 2
Packing instructions: FORBIDDEN(P&CA); 200
Labelling: 2.1

15. REGULATORY INFORMATION

Hazard symbols: Flammable.

Risk phrases: R10: Flammable.

Safety phrases: S16: Keep away from sources of ignition - No smoking.
S36/37/39: Wear suitable protective clothing, gloves and eye / face protection.

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.