Section 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: 1,1-DIFLUORO-2-IODOETHANE
CAS number: 598-39-0
Product code: PC1038

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

1.3. Details of the supplier of the safety data sheet

Company name: Apollo Scientific Ltd
Units 3 & 4
Parkway
Denton
Manchester
M34 3SG
UK
Tel: 0161 337 9971
Fax: 0161 336 6932
Email: david.tideswell@apolloscientific.co.uk

1.4. Emergency telephone number

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CHIP: Xn: R20/21/22; Xi: R36/37/38
Classification under CLP: Acute Tox. 4: H302+312+332; STOT SE 3: H335; Eye Irrit. 2: H319; Skin Irrit. 2: H315

Most important adverse effects: Harmful by inhalation, in contact with skin and if swallowed. Irritating to eyes, respiratory system and skin.

2.2. Label elements

Label elements under CLP:

Hazard statements: H302+312+332: Harmful if swallowed, in contact with skin or if inhaled.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H335: May cause respiratory irritation.

Signal words: Warning

Hazard pictograms: GHS07: Exclamation mark
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Precautionary statements:
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P271: Use only outdoors or in a well-ventilated area.

Label elements under CHIP:

Hazard symbols: Harmful.

Risk phrases: R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.
R36/37/38: Irritating to eyes, respiratory system and skin.

Safety phrases: S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S28: After contact with skin, wash immediately with plenty of water.
S36/37/39: Wear suitable protective clothing, gloves and eye / face protection.

2.3. Other hazards

PBT: This substance is not identified as a PBT substance.

Section 3: Composition/information on ingredients

3.1. Substances

Chemical identity: 1,1-DIFLUORO-2-IODOETHANE

Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Remove all contaminated clothes and footwear immediately unless stuck to skin.
Drench the affected skin with running water for 10 minutes or longer if substance is still on skin. Consult a doctor.

Eye contact: Bathe the eye with running water for 15 minutes. Consult a doctor.

Ingestion: Wash out mouth with water. Do not induce vomiting. If conscious, give half a litre of water to drink immediately. Consult a doctor.

Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so. Consult a doctor.

4.2. Most important symptoms and effects, both acute and delayed

Skin contact: There may be irritation and redness at the site of contact.
Eye contact: There may be irritation and redness. The eyes may water profusely.
Ingestion: There may be soreness and redness of the mouth and throat. Nausea and stomach pain may occur. There may be vomiting.
Inhalation: There may be irritation of the throat with a feeling of tightness in the chest.

4.3. Indication of any immediate medical attention and special treatment needed

[cont...]
Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Carbon dioxide, dry chemical powder, foam. Suitable extinguishing media for the surrounding fire should be used. Use water spray to cool containers.

5.2. Special hazards arising from the substance or mixture


5.3. Advice for fire-fighters

Advice for fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Refer to section 8 of SDS for personal protection details. If outside do not approach from downwind. If outside keep bystanders upwind and away from danger point. Mark out the contaminated area with signs and prevent access to unauthorised personnel. Turn leaking containers leak-side up to prevent the escape of liquid.

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers. Contain the spillage using bunding.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

6.4. Reference to other sections

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: Avoid direct contact with the substance. Ensure there is sufficient ventilation of the area. Do not handle in a confined space. Avoid the formation or spread of mists in the air. Only use in fume hood.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in cool, well ventilated area. Keep container tightly closed. Light Sensitive. Recommended storage temp 2-8 °C.

Suitable packaging: Must only be kept in original packaging.

7.3. Specific end use(s)

Specific end use(s): No data available.

[cont...]
Section 8: Exposure controls/personal protection

8.1. Control parameters

Workplace exposure limits: Not applicable.

8.2. Exposure controls

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: Impermeable gloves.

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

   Skin protection: Impermeable protective clothing.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

   State: Liquid
   Colour: Pale pink
   Boiling point/range °C: 86.8-87.1@740mmHg
   Relative density: 2.18 g/cm³

9.2. Other information

Other information: Not applicable.

Section 10: Stability and reactivity

10.1. Reactivity

   Reactivity: Stable under recommended transport or storage conditions.

10.2. Chemical stability

   Chemical stability: Stable under normal conditions.

10.3. Possibility of hazardous reactions

   Hazardous reactions: Hazardous reactions will not occur under normal transport or storage conditions.

10.4. Conditions to avoid

   Conditions to avoid: Heat.

10.5. Incompatible materials

   Materials to avoid: Strong oxidising agents. Strong acids.

10.6. Hazardous decomposition products

   Haz. decomp. products: In combustion emits toxic fumes of carbon dioxide / carbon monoxide.

Section 11: Toxicological information

11.1. Information on toxicological effects

[cont...]
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Relevant hazards for substance:

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Route</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity (ac. tox. 4)</td>
<td>INH DRM ING</td>
<td>Based on test data</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>DRM</td>
<td>Based on test data</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>OPT</td>
<td>Based on test data</td>
</tr>
<tr>
<td>STOT-single exposure</td>
<td>INH</td>
<td>Based on test data</td>
</tr>
</tbody>
</table>

Symptoms / routes of exposure

- **Skin contact**: There may be irritation and redness at the site of contact.
- **Eye contact**: There may be irritation and redness. The eyes may water profusely.
- **Ingestion**: There may be soreness and redness of the mouth and throat. Nausea and stomach pain may occur. There may be vomiting.
- **Inhalation**: There may be irritation of the throat with a feeling of tightness in the chest.
- **Other information**: High hazard Class III chemical: assigned according to Cramer decision tree with extensions (predicted *). Structural alert for genotoxic carcinogenicity. (predicted *)

Section 12: Ecological information

**12.1. Toxicity**

Ecotoxicity values: Not applicable.

**12.2. Persistence and degradability**

Persistence and degradability: Easily biodegradable (predicted *)

**12.3. Bioaccumulative potential**

Bioaccumulative potential: No data available.

**12.4. Mobility in soil**

Mobility: No data available.

**12.5. Results of PBT and vPvB assessment**

PBT identification: This substance is not identified as a PBT substance.

**12.6. Other adverse effects**

Other adverse effects: No data available.

Section 13: Disposal considerations

**13.1. Waste treatment methods**

- **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.

[cont...]
Section 14: Transport information

Transport class: This product does not require a classification for transport.

Section 15: Regulatory information

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

15.2. Chemical Safety Assessment

Chemical safety assessment: A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

Section 16: Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.


Phrases used in s.2 and 3:

H302+312+332: Harmful if swallowed, in contact with skin or if inhaled.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H335: May cause respiratory irritation.
R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.
R36/37/38: Irritating to eyes, respiratory system and skin.

Legal disclaimer: The material is intended for research purposes only and should be handled exclusively by those who have been fully trained in safety, laboratory and chemical handling procedures. The above information is believed to be correct to the best of our knowledge. The above information is believed to be correct to the best of our knowledge at the date of its publication, but should not be considered to be all inclusive. It should be used only as a guide for safe handling, storage, transportation and disposal. We cannot guarantee that the hazards detailed in this document are the only hazards that exist for this product. This is not a warranty and Apollo Scientific Ltd shall not be held liable for any damage resulting from handling or from contact with the above product.