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

1.1. Product identifier

Product name: 3-FLUORO-DL-TYROSINE
CAS number: 403-90-7
EINECS number: 206-964-0
Product code: PC4379

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

Emergency tel: -

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CLP: Acute Tox. 4: H312+332; Acute Tox. 3: H301
Most important adverse effects: Toxic if swallowed. Harmful in contact with skin or if inhaled.

2.2. Label elements

Label elements:

Hazard statements: H301: Toxic if swallowed.
                    H312+332: Harmful in contact with skin or if inhaled.

Hazard pictograms: GHS07: Exclamation mark

Signal words: Warning
Precautionary statements:
P271: Use only outdoors or in a well-ventilated area.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P260: Do not breathe dust.

2.3. Other hazards

PBT: This product is not identified as a PBT/vPvB substance.

Section 3: Composition/information on ingredients

3.1. Substances

Chemical identity: 3-FLUORO-DL-TYROSINE
CAS number: 403-90-7
EINECS number: 206-964-0

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

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.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: In combustion emits toxic fumes of carbon dioxide / carbon monoxide. Nitrogen oxides
(NOx). Hydrogen fluoride (HF).
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.

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: 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 dust in the air. Only use in fume hood.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in a cool, well ventilated area. Keep container tightly closed. Product is hygroscopic. Take precautions to avoid contact with atmospheric moisture. Store under Argon. 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.

Section 8: Exposure controls/personal protection

8.1. Control parameters

Workplace exposure limits: No data available.

DNEL/PNEC Values

DNEL / PNEC No data available.

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. Respiratory protective device with particle filter.
SAFETY DATA SHEET
3-FLUORO-DL-TYROSINE

Hand protection: Protective gloves.
Eye protection: Safety glasses. Ensure eye bath is to hand.
Skin protection: Protective clothing.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Powder
Colour: White
Evaporation rate: No data available.
Oxidising: Non-oxidising (by EC criteria)
Solubility in water: No data available.
Viscosity: No data available.
Boiling point/range °C: No data available.
Melting point/range °C: 280 (dec)
Flammability limits %: lower: No data available.
upper: No data available.
Flash point °C: No data available.
Part.coef. n-octanol/water: No data available.
Autoflammability °C: No data available.
Vapour pressure: No data available.
Relative density: No data available.
VOC g/l: No data available.

9.2. Other information

Other information: No data available.

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


10.5. Incompatible materials

Materials to avoid: Strong oxidising agents. Strong acids.

10.6. Hazardous decomposition products

SAFETY DATA SHEET
3-FLUORO-DL-TYROSINE

Section 11: Toxicological information

11.1. Information on toxicological effects

<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</td>
<td>Hazardous: calculated</td>
</tr>
<tr>
<td>Acute toxicity (ac. tox. 3)</td>
<td>ING</td>
<td>Hazardous: calculated</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.

Section 12: Ecological information

12.1. Toxicity

- **Ecotoxicity values:** No data available.

12.2. Persistence and degradability

- **Persistence and degradability:** No data available.

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 product is not identified as a PBT/vPvB 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.
Section 14: Transport information

14.1. UN number

UN number: UN2811

14.2. UN proper shipping name

Shipping name: TOXIC SOLID, ORGANIC, N.O.S.

14.3. Transport hazard class(es)

Transport class: 6.1

14.4. Packing group

Packing group: III

14.5. Environmental hazards

Environmentally hazardous: No  
Marine pollutant: No

14.6. Special precautions for user

Tunnel code: E

Transport category: 2

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 2015/830.


Phrases used in s.2 and s.3:

H301: Toxic if swallowed.

H312+332: Harmful in contact with skin or if inhaled.

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
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