SAFETY DATA SHEET

DIISOPROPYLETHYLAMINE TRIHYDROFLUORIDE

Compilation date: 14/03/2017

Revision date: 18/01/2018

Revision No: 2

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

1.1. Product identifier

Product name: DIISOPROPYLETHYLAMINE TRIHYDROFLUORIDE

CAS number: 131600-43-6

Product code: PC450270

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 CLP: Skin Corr. 1B: H314; Acute Tox. 2: H300+310+330; Flam. Liq. 3: H226

Most important adverse effects: Flammable liquid and vapour. Fatal if swallowed, in contact with skin or if inhaled.

Causes severe skin burns and eye damage.

2.2. Label elements

Label elements:

Hazard statements: H226: Flammable liquid and vapour.

H300+310+330: Fatal if swallowed, in contact with skin or if inhaled.

H314: Causes severe skin burns and eye damage.

Signal words: Danger

Hazard pictograms: GHS02: Flame

GHS05: Corrosion

GHS06: Skull and crossbones

[cont...]

Precautionary statements: P315: Get immediate medical attention.

P262: Do not get in eyes, on skin, or on clothing.

P260: Do not breathe dust/fumes/gas/mist/vapours/spray.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

2.3. Other hazards

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

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

Section 3: Composition/information on ingredients

3.1. Substances

Chemical identity: DIISOPROPYLETHYLAMINE TRIHYDROFLUORIDE

CAS number: 131600-43-6

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. Transfer to hospital if there are burns or symptoms of poisoning.

Eye contact: Bathe the eye with running water for 15 minutes. Transfer to hospital for specialist examination.

Ingestion: Wash out mouth with water. Do not induce vomiting. 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. If conscious, ensure the casualty sits or lies down. If unconscious and breathing is OK, place in the recovery position. If unconscious, check for breathing and apply artificial respiration if necessary. If breathing becomes bubbly, have the casualty sit and provide oxygen if available. Transfer to hospital as soon as possible.

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

Skin contact: There may be redness or whiteness of the skin in the area of exposure. Irritation or pain may occur at the site of contact. Absorption through the skin may be fatal.

Eye contact: There may be severe pain. The eyes may water profusely.

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. Convulsions may occur. There may be loss of consciousness.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure.

[cont...]

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

Immediate / special treatment: Immediate medical attention is required. Show this safety data sheet to the doctor in attendance. Immediately wash with chelation agent such as hexafluor wash or 2.5% calcium gluconate gel. Continue application after burning stops or transfer to hospital is complete Immediate transfer to hospital is required- reguardless of tratment after exposure. Effects may be severe and delayed. Show this SDS to doctor in attendance.

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Carbon dioxide, dry chemical powder, foam. Use water spray to cool containers.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: In combustion emits toxic fumes. Flammable. Toxic. Forms explosive air-vapour mixture. 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: Notify the police and fire brigade immediately. Eliminate all sources of ignition. 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. Do not attempt to take action without suitable protective clothing - see section 8 of SDS. 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: Clean-up should be dealt with only by qualified personnel familiar with the specific substance. 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.

6.4. Reference to other sections

Reference to other sections: Refer to section 8 of SDS.

[cont...]

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: Avoid direct contact with the substance. Ensure there is exhaust ventilation of the area. Avoid the formation or spread of mists in the air. Smoking is forbidden. Use non-sparking tools. Only use in fume hood. Do not breathe dust, vapour, mist or gas.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in a 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. Air sensitive. Moisture sensitive. Store under Argon.

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 exhaust ventilation of the area. Ensure lighting and electrical equipment are not a source of ignition.

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

Hand protection: Impermeable gloves.

Eye protection: Safety glasses with side-shields. 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: Colourless to brown

Evaporation rate: No data available.

Oxidising: No data available.

Solubility in water: Soluble

Viscosity: No data available.

Boiling point/range°C: 93-95/4mm

Melting point/range°C: No data available.

Flammability limits %: lower: No data available.

upper: No data available.

Flash point°C: 40.5

[cont...]

Part.coeff. n-octanol/water: No data available.

Autoflammability°C: No data available.

Vapour pressure: No data available.

Relative density: 0.965

pH: 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. Stable at room temperature.

10.3. Possibility of hazardous reactions

Hazardous reactions: Hazardous reactions will not occur under normal transport or storage conditions. Decomposition may occur on exposure to conditions or materials listed below.

10.4. Conditions to avoid

Conditions to avoid: Heat. Hot surfaces. Sources of ignition. Flames. Moist air. Humidity. Air.

10.5. Incompatible materials

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

10.6. Hazardous decomposition products

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

Section 11: Toxicological information

11.1. Information on toxicological effects

Relevant hazards for product:

Hazard	Route	Basis
Acute toxicity (ac. tox. 2)	INH DRM ING	Hazardous: calculated
Skin corrosion/irritation	DRM	Hazardous: calculated
Serious eye damage/irritation	OPT	Hazardous: calculated

Symptoms / routes of exposure

Skin contact: There may be redness or whiteness of the skin in the area of exposure. Irritation or pain may occur at the site of contact. Absorption through the skin may be fatal.

Eye contact: There may be severe pain. The eyes may water profusely.

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.

[cont...]

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. Convulsions may occur. There may be loss of consciousness.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure.

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: UN3286

14.2. UN proper shipping name

Shipping name: FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S.
(Diisopropylethylamine trihydrofluoride)

14.3. Transport hazard class(es)

Transport class: 3 (6.1+8)

[cont...]

14.4. Packing group

Packing group: II

14.5. Environmental hazards

Environmentally hazardous: No **Marine pollutant:** No

14.6. Special precautions for user

Tunnel code: D/E

Transport category: 2

Section 15: Regulatory information

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

Specific regulations: Not applicable.

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

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 2015/830.

---

* Data predicted using computational software. The OECD QSAR-Toolbox for grouping chemicals into categories. Developed by LMC bulgaria. http://echa.europa.eu/support/oecd-qsar-toolbox

~ Data predicted using computational software ACD/ToxSuite v 2.95.1 Copyright 1994-2009 ACD/labs, Copyright 2001-2009 Pharma Algorithms, Inc, Advanced Chemistry Development, Inc (ACD/Labs). http://www.acdlabs.com/products/pc_admet/tox/tox/

Phrases used in s.2 and s.3: H226: Flammable liquid and vapour.
H300+310+330: Fatal if swallowed, in contact with skin or if inhaled.
H314: Causes severe skin burns and eye damage.

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.