

Safety Data Sheet

according to UK REACH (SI 2020/1577) as amended

Issue date: 06.05.2026

Version number: 1.1 (replaces version 1.0)

Revision date: 06.05.2026

* SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** Fmoc-Thr(tBu)-OH >99%
- **Product Code:** 60-1139-25
- **CAS Number:**
71989-35-0
- **EC number:**
276-261-1
- **Registration number**
UK REACH: Currently not applicable due to low volume (<1 Te/A) demand not requiring a registration.
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Product category** PC21 Laboratory chemicals
- **Application of the substance / the mixture** Laboratory chemicals
- **Uses advised against** None identified
- **1.3 Details of the supplier of the safety data sheet**
- **Supplier:**
Severn Biotech Ltd.
Unit 2,
Park Lane,
Kidderminster,
Worcestershire.
DY11 6TJ
UK
Tel: 0044 1562 825286
Fax: 0044 1562 825284
email: info@severnbiotech.com
- **Further information obtainable from:** Product safety department.
- **1.4 Emergency telephone number:**
Members of the public seeking specific information on poisons should contact:
In England and Wales: NHS 111 - dial 111
In Scotland: NHS 24 - dial 111

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to GB-CLP**
Aquatic Acute 1 H400 Very toxic to aquatic life.
Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.
- **2.2 Label elements**
- **Labelling according to GB-CLP** The substance is classified and labelled according to the GB CLP regulation.
- **Hazard pictograms**



GHS09

- **Signal word** Warning
- **Hazard statements**
H410 Very toxic to aquatic life with long lasting effects.

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- **Precautionary statements**
 - P273 Avoid release to the environment.
 - P391 Collect spillage.
 - P501 Dispose of contents/container in accordance with local regulations.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable
- **vPvB:** Not applicable
- **Determination of endocrine-disrupting properties** Not applicable

SECTION 3: Composition/information on ingredients

- **3.1 Substances**
- **CAS No. Description**
 - CAS: 71989-35-0 N-[(9H-fluoren-9-ylmethoxy)carbonyl]-O-isopropyl-L-threonine
- **Identification number(s)**
- **EC number:** 276-261-1

* SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
 - Immediately wash with water and soap and rinse thoroughly.
 - If skin irritation continues, consult a doctor.
- **After eye contact:**
 - Check for and remove any contact lenses.
 - Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**
 - Rinse out mouth and then drink plenty of water.
 - If symptoms persist consult doctor.
- **Information for doctor:** Treat symptomatically and supportively.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
 - No further relevant information available.

* SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
 - CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
 - Use fire extinguishing methods suitable to surrounding conditions.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture**
 - As with most organic solids, fire is possible at elevated temperatures or by contact with an ignition source.
 - Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
 - In case of fire, the following can be released:
 - Carbon monoxide and carbon dioxide

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Nitrogen oxides (NO_x)**· 5.3 Advice for firefighters****· Protective equipment:**

Wear fully protective suit.

Wear self-contained respiratory protective device.

Do not inhale explosion gases or combustion gases.

· Additional information

Cool endangered receptacles with water spray.

Collect contaminated fire fighting water separately. It must not enter the sewage system.

*** SECTION 6: Accidental release measures****· 6.1 Personal precautions, protective equipment and emergency procedures**

Avoid formation of dust.

Ensure adequate ventilation

· 6.2 Environmental precautions: Do not allow product to reach sewage system or any water course.**· 6.3 Methods and material for containment and cleaning up:**

Pick up mechanically.

Send for recovery or disposal in suitable receptacles.

· 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

*** SECTION 7: Handling and storage****· 7.1 Precautions for safe handling**

Prevent formation of dust.

Ensure good ventilation/exhaustion at the workplace.

· Information about fire - and explosion protection:

There is a risk of a dust explosion if the following conditions are met:

- The substance is present in very finely distributed form (powder, dust).

- The substance is whirled up in sufficient quantity in the air.

- An ignition source is present (flame, spark, electrostatic discharge, etc.)

· 7.2 Conditions for safe storage, including any incompatibilities**· Storage:****· Requirements to be met by storerooms and receptacles:** No special requirements.**· Information about storage in one common storage facility:** Store away from oxidising agents.**· Further information about storage conditions:** Store in cool, dry conditions in well sealed receptacles.**· 7.3 Specific end use(s)** No further relevant information available.*** SECTION 8: Exposure controls/personal protection****· 8.1 Control parameters****· Ingredients with limit values that require monitoring at the workplace:** Not required.**· Additional information:** The lists valid during the making were used as basis.**· 8.2 Exposure controls****· Appropriate engineering controls**

Provide general and/or local exhaust ventilation to control airborne levels below the exposure limits.

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If exposure limits have not been established, maintain airborne levels to an acceptable level.

· **Individual protection measures, such as personal protective equipment**

· **General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Do not breathe dust

Avoid close or long term contact with the skin.

Do not eat, drink, smoke or sniff while working.

Avoid contact with the eyes.

Wash hands before breaks and at the end of work.

· **Respiratory protection:**



During dust-raising work:

Use respiratory equipment with particle filter, type P3.

· **Hand protection**



For prolonged contact, use protective gloves tested and approved under appropriate government standards such as NIOSH (US) or EN374 (EU).

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye/face protection**



Safety glasses with side-shields conforming to EN166.

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

· **Body protection:**



Protective work clothing

Body protection must be chosen depending on product properties, activity and possible exposure.

* SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Physical state**

Solid

· **Colour:**

White

· **Odour:**

Characteristic

· **Odour threshold:**

Not determined

· **Melting point/freezing point:**

134 °C

· **Boiling point or initial boiling point and boiling range**

Undetermined

· **Flammability**

Not applicable

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· Lower and upper explosion limit	
· Lower:	Not determined
· Upper:	Not determined
· Flash point:	Not applicable
· Decomposition temperature:	Not determined
· pH	Not determined
· Viscosity:	
· Kinematic viscosity	Not determined
· Dynamic:	Not determined
· Solubility	
· water:	Slightly soluble.
· Partition coefficient n-octanol/water (log value)	Not determined
· Vapour pressure:	Not determined
· Density and/or relative density	
· Density:	Not determined
· Relative density	Not determined
· Vapour density	Not determined
· Particle characteristics	Not determined
· 9.2 Other information	
· Appearance:	
· Form:	Powder
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Not determined
· Explosive properties:	Product is not explosive. However, formation of explosive air/dust mixtures are possible.
· Change in condition	
· Evaporation rate	Not applicable.
· Information with regard to physical hazard classes	Not applicable

* SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
There is a risk of a dust explosion if the following conditions are met:
 - The substance is given in very finely distributed form (powder, dust).
 - The substance is whirled up in sufficient quantity in the air.
 - An ignition source is present (flame, spark, electrostatic discharge, etc.)
 No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions** Reacts with oxidising agents.
- **10.4 Conditions to avoid** Heat and static discharge.
- **10.5 Incompatible materials:** Strong acids and oxidising agents
- **10.6 Hazardous decomposition products:**
Carbon monoxide and carbon dioxide
Nitrogen oxides (NO_x)

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SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **11.2 Information on other hazards**
- **Endocrine disrupting properties** Substance is not listed.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** biodegradable
- **12.3 Bioaccumulative potential** Product is not expected to bioaccumulate.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable
- **vPvB:** Not applicable
- **12.6 Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.

* SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Recommended Hierarchy of Controls:
 - Minimise waste;
 - Reuse if not contaminated;
 - Recycle, if possible; or
 - Safe disposal (if all else fails).
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Contact waste processors for recycling information.
Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation.

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· UK List of Waste

HP14 Ecotoxic

· Uncleaned packaging:
· Recommendation:

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.

Disposal must be made according to official regulations.

Container remains hazardous when empty. Continue to observe all precautions.

Containers, even those that are "empty," may contain residues that can develop flammable and/or hazardous vapours upon heating. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers.

· Recommended cleansing agents: Water, if necessary together with cleansing agents.

* **SECTION 14: Transport information**
· 14.1 UN number or ID number
· ADR, IMDG, IATA

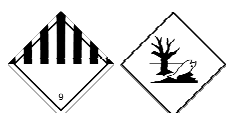
UN3077

· 14.2 UN proper shipping name
· ADR

UN3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (N-[(9H-fluoren-9-ylmethoxy)carbonyl]-O-isopropyl-L-threonine)

· IMDG, IATA

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (N-[(9H-fluoren-9-ylmethoxy)carbonyl]-O-isopropyl-L-threonine)

· 14.3 Transport hazard class(es)
· ADR, IMDG, IATA

· Class

9 Miscellaneous dangerous substances and articles.

· Label

9

· 14.4 Packing group
· ADR, IMDG, IATA

III

· 14.5 Environmental hazards:
· Marine pollutant:

Symbol (fish and tree)

· Special marking (ADR):

Symbol (fish and tree)

· Special marking (IATA):

Symbol (fish and tree)

· 14.6 Special precautions for user

Warning: Miscellaneous dangerous substances and articles.

· Emergency Action Code:

2Z

· Stowage Category

A

· Stowage Code

SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.

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· 14.7 Maritime transport in bulk according to IMO instruments	Not applicable
· Transport/Additional information:	Amounts up to 5kg or 5L per single or inner package are not regulated according to ADR/RID/IMDG SP 375 and IATA SP A197.
· ADR	
· Limited quantities (LQ)	5 kg
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· Tunnel restriction code	-
· IMDG	
· Limited quantities (LQ)	5 kg
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· UN "Model Regulation":	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (N-[(9H-FLUOREN-9-YLMETHOXY)CARBONYL]-O-ISOPROPYL-L-THREONINE), 9, III

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.
- **Poisons Act**
- **Regulated explosives precursors** Substance is not listed.
- **Regulated poisons** Substance is not listed.
- **Reportable explosives precursors** Substance is not listed.
- **Reportable poisons** Substance is not listed.
- **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**
Substance is not listed.
- **REGULATION (EU) 2019/1148**
- **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**
Substance is not listed.
- **Annex II - REPORTABLE EXPLOSIVES PRECURSORS** Substance is not listed.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** Product safety department.
- **Date of previous version:** 07.11.2012
- **Version number of previous version:** 1.0

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· Abbreviations and acronyms:

UK REACH: REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals

GB CLP: REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.

UFI: Unique Formula Identifier

UK- REACH: The UK REACH etc. (Amendment etc.) (EU Exit) Regulations 2019 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals

GB- CLP: Retained GB CLP Regulation (EU) No. 1272/2008 as amended for Great Britain on the Classification, Labelling and Packaging of Chemicals.

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

· * Data compared to the previous version altered.

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