



SAFETY DATA SHEET

**Product Name** Fmoc-L-Thr(tBu)-OH

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**SECTION 1: IDENTIFICATION**

**1.1 GHS Product identifier**

Product name Fmoc-O-tert-Butyl-L-threonine

**1.2 Other means of identification**

Cas No. 71989-35-0

Other names (2S,3R)-2-(9H-fluoren-9-ylmethoxycarbonylamino)-3-[(2-methylpropan-2-yl)oxy]butanoic acid

**1.3 Recommended use of the chemical and restrictions on use**

Identified uses For industry use only.

Uses advised against no data available

**1.4 Supplier's details**

Company CEM Corporation  
3100 Smith Farm Rd  
Matthews, NC 28106

**1.5 Emergency phone number**

Emergency phone number 704-821-7015

Service hours Monday to Friday, 8:30am-5pm (EST)

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**SECTION 2: HAZARD(S) IDENTIFICATION**

**2.1 Classification of the substance or mixture**

Not classified.

**2.2 GHS label elements, including precautionary statements**



Pictogram(s)

Signal word

Warning

Hazard statement(s)

H410 Very toxic to aquatic life with long lasting effects

Precautionary statement(s)

Prevention

P273 Avoid release to the environment.

Response

P391 Collect spillage.

Storage

none

Disposal

P501 Dispose of contents/container to...

**2.3 Other hazards which do not result in classification**

None

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**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

| Chemical Name                 | Common names and synonyms     | CAS No     | EC Number | Part Number |
|-------------------------------|-------------------------------|------------|-----------|-------------|
| Fmoc-O-tert-Butyl-L-threonine | Fmoc-O-tert-Butyl-L-threonine | 71989-35-0 | None      | A017        |

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## SECTION 4: FIRST-AID MEASURES

### 4.1 Description of necessary first-aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### 4.2 Most important symptoms/effects, acute and delayed

no data available

### 4.3 Indication of immediate medical attention and special treatment needed, if necessary

no data available

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## SECTION 5: FIRE-FIGHTING MEASURES

### 5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

### 5.2 Specific hazards arising from the chemical

no data available

### 5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas.

Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.



## 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

## 6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal. Sweep up and shovel. Keep in suitable, closed containers for disposal

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## SECTION 7: HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Avoid exposure - obtain special instructions before use. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

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## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

Occupational Exposure limit values

no data available

Biological limit values

no data available

### 8.2 Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

### 8.3 Individual protection measures, such as personal protective equipment (PPE)

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).

#### Skin protection

Wear impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

#### Respiratory protection

Wear dust mask when handling large quantities.

**Thermal hazards**  
no data available

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**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

|   |                                       |
|---|---------------------------------------|
| <b>Physical state</b>   | White to off-white crystalline powder |
| <b>Colour</b>   | no data available                     |
| <b>Odour</b>  | no data available                     |
| <b>Melting point/ freezing point</b>                            | no data available                     |
| <b>Boiling point or initial boiling point and boiling range</b> | no data available                     |
| <b>Flammability</b>   | no data available                     |
| <b>Lower and upper explosion limit / flammability limit</b>     | no data available                     |
| <b>Flash point</b>  | no data available.                    |
| <b>Auto-ignition temperature</b>                                | no data available                     |
| <b>Decomposition temperature</b>                                | no data available                     |
| <b>pH</b>   | no data available                     |
| <b>Kinematic viscosity</b>                                      | no data available                     |
| <b>Solubility</b>   | no data available                     |
| <b>Partition coefficient n-octanol/water (log value)</b>        | no data available                     |
| <b>Vapour pressure</b>  | no data available                     |
| <b>Density and/or relative density</b>                          | no data available                     |
| <b>Relative vapour density</b>                                  | no data available                     |
| <b>Particle characteristics</b>                                 | no data available                     |

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**SECTION 10: STABILITY AND REACTIVITY**

**10.1 Reactivity**

no data available

**10.2 Chemical stability**

Stable under recommended storage conditions.

**10.3 Possibility of hazardous reactions**

no data available

**10.4 Conditions to avoid**

no data available

**10.5 Incompatible materials**

no data available

**10.6 Hazardous decomposition products**

no data available



## **SECTION 11: TOXICOLOGICAL INFORMATION**

### **Acute toxicity**

Oral: no data available

Inhalation: no data available

Dermal: no data available

### **Skin corrosion/irritation**

no data available

### **Serious eye damage/irritation**

no data available

### **Respiratory or skin sensitization**

no data available

### **Germ cell mutagenicity**

no data available

### **Carcinogenicity**

no data available

### **Reproductive toxicity**

no data available

### **STOT-single exposure**

no data available

### **STOT-repeated exposure**

no data available

### **Aspiration hazard**

no data available

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## **SECTION 12: ECOLOGICAL INFORMATION (NON-MANDATORY)**

### **12.1 Toxicity**

Toxicity to fish: no data available

Toxicity to daphnia and other aquatic invertebrates: no data available

Toxicity to algae: no data available



Toxicity to microorganisms: no data available

**12.2 Persistence and degradability**

no data available

**12.3 Bioaccumulative potential**

no data available

**12.4 Mobility in soil**

No data available

**12.5 Other adverse effects**

no data available

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**SECTION 13: DISPOSAL CONSIDERATIONS (NON-MANDATORY)**

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

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**SECTION 14: TRANSPORT INFORMATION (NON-MANDATORY)**

**14.1 UN Number**

ADR/RID: UN3077 IMDG: UN3077 IATA: UN3077

**14.2 UN Proper Shipping Name**

ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

**14.3 Transport hazard class(es)**

ADR/RID: 9 IMDG: 9 IATA: 9

**14.4 Packing group, if applicable**

ADR/RID: II IMDG: II IATA: II

**14.5 Environmental hazards**

ADR/RID: yes IMDG: yes IATA: yes

**14.6 Special precautions for user**

no data available

**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

no data available

**SECTION 15: REGULATORY INFORMATION (NON-MANDATORY)**

**United States of America**

**SARA 313**

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 302**

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**Clean Water Act**

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

**DEA List I**

Not listed

**DEA List II**

Not listed

**US State Regulations**

**Massachusetts Right To Know**

Remarks

No components are subject to the Massachusetts Right to Know Act.

**California Prop 65 Components**

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

**Notification status**

TSCA: Not Listed on TSCA inventory. For Research and Development Use only. Not For Manufacturing or Commercial Purposes.

DSL: This product contains one or several components that are not on the Canadian DSL nor NDSL.

**SECTION 16: OTHER INFORMATION**

| Chemical Name                 | Common names and synonyms     | CAS No     | EC Number | Part Number |
|-------------------------------|-------------------------------|------------|-----------|-------------|
| Fmoc-O-tert-Butyl-L-threonine | Fmoc-O-tert-Butyl-L-threonine | 71989-35-0 | None      | A017        |

**Information on revision**

**Revision Date** Aug 08/2020

**Abbreviations and acronyms**

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

#### **References**

IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>

HSDB - Hazardous Substances Data Bank, website:

<https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website:

[http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)

CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>

<http://www.phmsa.dot.gov/hazmat/library/erg>

Germany GESTIS-database on hazard substance, website:

<http://www.dguv.de/ifa/gestis/gestisstoffdatenbank/index-2.jsp>

ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

*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. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. We as supplier shall not be held liable for any damage resulting from handling or from contact with the above product.*