

SAFETY DATA SHEET **Product Name** Fmoc-L-Ser(tBu)-OH

# **SECTION 1: IDENTIFICATION**

1.1 GHS Product identifier	
Product name	FMOC-O-tert-Butyl-L-serine
1.2 Other means of identification	ion
Cas No.	71989-33-8
Other names	(2S)-2-(9H-fluoren-9-ylmethoxycarbonylamino)-3-[(2-methylpropan-2-
	yl)oxy]propanoicacid
1.3 Recommended use of the c	hemical 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)

skin

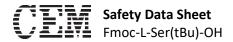
# SECTION 2: HAZARD(S) IDENTIFICATION

2.1 Classification of the substance or mixture

Not classified.

# 2.2 GHS label elements, including precautionary statements

<i>,</i> <b>.</b>	
Pictogram(s)	$\mathbf{\vee}$
Signal word	Warning
Hazard statement(s)	H302 Harmful if swallowed
	H312 Harmful in contact with
	H332 Harmful if inhaled
Precautionary statement(s)	
Prevention	none.
Response	none
Storage	none
Disposal	none
2.3 Other hazards which do not resu	It in classification
None	



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

Chemical Name	Common names and	CAS No	EC	Part
	synonyms		Number	Number
FMOC-O-tert-Butyl-L-serine	FMOC-O-tert-Butyl-L-serine	71989-33-8	None	A016

## **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

## **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.

## 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

## **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.

## 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.

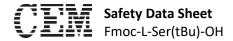
#### 8.3 Individual protection measures, such as personal protective equipment (PPE)

#### 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

## **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**Physical state** Colour Odour Melting point/ freezing point Boiling point or initial boiling point and boiling range Flammability Lower and upper explosion limit / flammability limit Flash point **Auto-ignition temperature Decomposition temperature** pН **Kinematic viscosity** Solubility Partition coefficient n-octanol/water (log value) Vapour pressure Density and/or relative density **Relative vapour density Particle characteristics** 

White to off-white powder no data available no data available

## **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

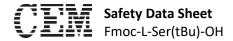
no data available

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

## SECTION 12: ECOLOGICAL INFORMATION (NON-MANDATORY) 12.1Toxicity

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

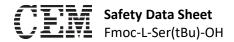
**12.5 Other adverse effects** 

no data available

## 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.

## SECTION 14: TRANSPORT INFORMATION (NON-MANDATORY) 14.1 UN Number ADR/RID: Not dangerous goods. IMDG: Not dangerous goods. IATA: Not dangerous goods. 14.2 UN Proper Shipping Name ADR/RID: unknown IMDG: unknown IATA: unknown 14.3 Transport hazard class(es) ADR/RID: Not dangerous goods. IMDG: Not dangerous goods. IATA: Not dangerous goods. **14.4 Packing group, if applicable** ADR/RID: Not dangerous goods. IMDG: Not dangerous goods. IATA: Not dangerous goods. **14.5 Environmental hazards** ADR/RID: no IMDG: no IATA: no 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	Part
			Number	Number
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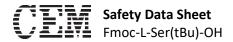
## Information on revision

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 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: htt p://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.