

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

SECTION 1: IDENTIFICATION

1.1 GHS Product identifier	
Product name	Fmoc-O-tert-butyl-L-tyrosine
1.2 Other means of identifica	tion
Cas No.	71989-38-3
Other names	(2S)-2-(9H-fluoren-9-ylmethoxycarbonylamino)-3-[4-[(2-methylpropan-
	2-yl)oxy]phenyl]propanoic 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 E Emergenev phone number	

1.5 Emergency phone number704-821-7015Service hoursMonday to Friday, 8:30am-5pm (EST)

SECTION 2: HAZARD(S) IDENTIFICATION

2.1 Classification of the substance or mixture

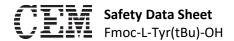
Not classified.

2.2 GHS label elements, including precautionary statements

Pictogram(s)	No symbol.			
Signal word	No signal word.			
Hazard statement(s)	none.			
Precautionary statement(s)				
Prevention	none.			
Response	none			
Storage	none			
Disposal	none			
2.3 Other hazards which do not result in classification				
N 1				

None

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS



Chemical Name	Common names and	CAS No	EC	Part
	synonyms		Number	Number
Fmoc-O-tert-butyl-L-tyrosine	Fmoc-O-tert-butyl-L-tyrosine	71989-38-3	None	A019

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

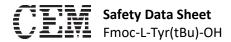
SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical state Colour Odour	White to off-white crystalline powder no data available no data available
Melting point/ freezing point	no data available
Boiling point or initial boiling point	
and boiling range	no data available
Flammability	no data available
Lower and upper explosion limit /	
flammability limit	no data available
Flash point	no data available
Auto-ignition temperature	no data available
Decomposition temperature	no data available
рН	no data available
Kinematic viscosity	no data available
Solubility	no data available
Partition coefficient n-octanol/water	
(log value)	no data available
Vapour pressure	no data available
Density and/or relative density	no data available
Relative vapour density	no data available
Particle characteristics	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: REGUL/	ATORY INFORMATION (NON-MANDATORY)
	tes of Americ	ca
	RA 313	
tha	at exceed the	pes not contain any chemical components with known CAS numbers e threshold (De Minimis) reporting levels established by SARA Title III,
	ction 313.	
•	RA 302	a this material are subject to the remarking requirements of CADA Title
	Section 302	n this material are subject to the reporting requirements of SARA Title
Cle	ean Water Ac	xt
	•	es not contain any Hazardous Substances listed under the U.S. CleanWater Act, able 116.4A.
	is product do ction 311, Ta	es not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, able 117.3.
	A List I	
No	t listed	
DE	A List II	
No	t listed	
US State Reg	gulations	
Ma	assachusetts	s Right To Know
Re	marks	
No	components	are subject to the Massachusetts Right to Know Act.
Ca	lifornia Prop	65 Components
Thi	is product do	es not contain any chemicals known to the State of California to cause
car	ncer, birth, oi	r any other reproductive defects.
Notification s	status	
TS	CA:	Not Listed on TSCA inventory. For Research and Development Use only. Not For Manufacturing or Commercial Purposes.
DS	iL:	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
Fmoc-O-tert-butyl-L-tyrosine	Fmoc-O-tert-butyl-L-tyrosine	71989-38-3	None	A019

Information on revision

Revision Date Aug 08/2020

Abbreviations and acronyms

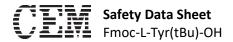
CAS: Chemical Abstracts Service

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.