



Product: Fmoc-OSu  
SDS No: 321011  
Revision: 1.0

## Safety Data Sheet

### Section 1 - Product and Company Information

Product Name: Fmoc-OSu  
Product Code: 321011  
Company: CSBio(Shanghai) Ltd  
EMERGENCY CONTACTS: Dr. Simon Zhu +86-21-50781655

### Section 2 - Hazards Identification

#### 2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, Oral (Category 4), H302

Skin sensitisation (Category 1), H317

Acute aquatic toxicity (Category 2), H401

Chronic aquatic toxicity (Category 2), H411

For the full text of the H-Statements mentioned in this Section, see Section 16

#### 2.2 GHS Label elements, including precautionary statements



Pictogram

Signal word

Warning

Hazard statement(s)

H302 Harmful if swallowed.

H317 May cause an allergic skin reaction.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P272 Contaminated work clothing should not be allowed out of the workplace.

P273 Avoid release to the environment.

P280 Wear protective gloves.

P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P321 Specific treatment (see supplemental first aid instructions on this label).

P330 Rinse mouth.

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

P363 Wash contaminated clothing before reuse.

P391 Collect spillage.

**CSBio Co.**

Pilot Free Trade Zone, 85 Faladi Road, Building 2, Room 502, Shanghai 201210, China  
Tel: +86-21-50781655 • Fax: +86-21-50781652 • Email: [quality@csbiochina.com](mailto:quality@csbiochina.com) • [www.csbiochina.com](http://www.csbiochina.com)  
U.S. Headquarter: 20 Kelly Court, Menlo Park, CA 94025 USA  
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P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

### Section 3 - Composition/Information on Ingredients

Substance Name	Fmoc-OSu
CAS No.	82911-69-1
Formula	$C_{19}H_{15}NO_5$

### Section 4 - First Aid Measures

#### 4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

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

Flush eyes with water as a precaution.

If swallowed

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

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

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 Special hazards arising from the substance or mixture

Carbon oxides, Nitrogen oxides (NO<sub>x</sub>)

#### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

#### 5.4 Further information

No data available

### 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. Avoid breathing dust.

For personal protection see section 8.

#### 6.2 Environmental precautions

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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 without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

**6.4 Reference to other sections**

For disposal see section 13.

## Section 7 - Handling and Storage

**7.1 Precautions for safe handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.

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**

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

Keep in a Cool dry place ( $\leq 25^{\circ}\text{C}$ )

Store under inert gas. Moisture sensitive. Keep in a dry place.

Storage class (TRGS 510): Non Combustible Solids

**7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## Section 8 - Exposure Controls / PPE

**8.1 Control parameters**

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

**8.2 Exposure controls**

Appropriate engineering controls

General industrial hygiene practice.

Personal protective equipment

Eye/face protection

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

Skin protection

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.

Body Protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration

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and amount of the dangerous substance at the specific workplace.

#### Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Control of environmental exposure

No special environmental precautions required.

## Section 9 - Physical/Chemical Properties

Appearance:	White to off white crystalline powder
Molecular Weight:	337.33
pH:	N/A
BP/BP Range:	N/A
MP/MP Range:	147-155°C
Freezing Point:	N/A
Vapor Pressure:	N/A
Vapor Density:	N/A
Saturated Vapor Conc.	N/A
SG/Density:	N/A
Bulk Density:	N/A
Odor Threshold:	N/A
Volatile%:	N/A
VOC Content:	N/A
Water Content:	N/A
Solvent Content:	N/A
Evaporation Rate:	N/A
Viscosity:	N/A
Surface Tension:	N/A
Partition Coefficient:	N/A
Decomposition Temp.:	N/A
Flash Point:	N/A
Explosion Limits:	N/A
Flammability:	N/A
Autoignition Temp:	N/A
Refractive Index:	N/A

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Optical Rotation: N/A

Miscellaneous Data: N/A

Solubility: N/A

## 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

Strong oxidizing agents

### 10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NO<sub>x</sub>)

Other decomposition products - No data available

In the event of fire: see section 5

## Section 11 - Toxicological Information

### 11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - > 200 mg/kg

Inhalation: No data available

LD50 Dermal - Rat - > 2,000 mg/kg

(OECD Test Guideline 402)

No data available

Inhalation: No data available

Dermal: No data available

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable,

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possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

## Section 12 - Ecological Information

### 12.1 Toxicity

Toxicity to fish LC50 - Danio rerio (zebra fish) - 2.4 mg/l - 96.0 h(1-[[[9H-Fluoren-9-ylmethoxy]carbonyl]oxy]-2,5-pyrrolidinedione) LC100 - Danio rerio (zebra fish) - 3.7 mg/l - 96 h(1-[[[9H-Fluoren-9-ylmethoxy]carbonyl]oxy]-2,5-pyrrolidinedione)

Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - > 4.6 mg/l - 48 h(1-[[[9H-Fluoren-9-ylmethoxy]carbonyl]oxy]-2,5-pyrrolidinedione)

Toxicity to algae EC50 - Desmodesmus subspicatus (green algae) - > 6 mg/l - 72 h(1-[[[9H-Fluoren-9-ylmethoxy]carbonyl]oxy]-2,5-pyrrolidinedione)

### 12.2 Persistence and degradability

Biodegradability Result: 15 % - According to the results of tests of biodegradability this product is not readily biodegradable. (OECD Test Guideline 301)

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available(1-[[[9H-Fluoren-9-ylmethoxy]carbonyl]oxy]-2,5-pyrrolidinedione)

### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

### 12.6 Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to

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aquatic life with long lasting effects.

## Section 13 - Disposal Considerations

### 13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

## Section 14 - Transport Information

DOT (US)

Not dangerous goods

IMDG

UN number: 3077 Class: 9 Packing group: III EMS-No: F-A, S-F Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (1-[[[9H-Fluoren-9-ylmethoxy]carbonyl]oxy]-2,5-pyrrolidinedione)

Marine pollutant : yes

IATA

UN number: 3077 Class: 9 Packing group: III Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (1-[[[9H-Fluoren-9-ylmethoxy]carbonyl]oxy]-2,5-pyrrolidinedione)

Further information

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

## Section 15 - Regulatory Information

SARA 302 Components

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

SARA 313 Components

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 311/312 Hazards

No SARA Hazards

Massachusetts Right To Know Components

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

Pennsylvania Right To Know Components

Fmoc-OSu CAS-No. 82911-69-1 Revision Date

New Jersey Right To Know Components

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California Prop. 65 Components

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

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other reproductive harm.

## Section 16 - Other Information

Full text of H-Statements referred to under sections 2 and 3.

H302 Harmful if swallowed.

H317 May cause an allergic skin reaction.

H401 Toxic to aquatic life.

H411 Toxic to aquatic life with long lasting effects.

### DISCLAIMER

For R&D use only. Not for drug, household or other uses.

### WARRANTY

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. CSBio (Shanghai) Ltd., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.



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