

Rev 03 11/2020

## SAFETY DATA SHEET

Product Name Fmoc-L-Asp(OtBu)-OH

## **SECTION 1: IDENTIFICATION**

## 1.1 GHS Product identifier

Product name FMOC-L-Aspartic acid

# 1.2 Other means of identification

Cas No. 71989-14-5

Other names Fmoc-L-aspartic acid 4-tert-butyl ester

## 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)

# **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

none

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

Chemical Name	Common names and	CAS No	EC	Part
	synonyms		Number	Number
FMOC-L-Aspartic acid 2-tert-butyl	FMOC-L-Aspartic acid 2-tert-	71989-14-5	None	A004
ester	butyl			
	ester			



Rev 03 11/2020

#### **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



Rev 03 11/2020

## **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**

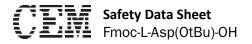
Wear impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique(without touching glove's outer surface) 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



Rev 03 11/2020

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

Physical state White to off-white crystalline powder

Colourno data availableOdourno data available

Melting point/ freezing point no data available

**Boiling point or initial boiling point** 

and boiling rangeno data availableFlammabilityno data available

Lower and upper explosion limit /

flammability limitno data availableFlash pointno data availableAuto-ignition temperatureno data availableDecomposition temperatureno data availablepHno data availableKinematic viscosityno data availableSolubilityno data available

Partition coefficient n-octanol/water

(log value)no data availableVapour pressureno 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



Rev 03 11/2020

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



c-L-Asp(OtBu)-OH Rev 03 11/2020

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)**

# Land transport (DOT)

Not classified as dangerous in the meaning of transport regulations.

#### Air transport (IATA)

Not classified as dangerous in the meaning of transport regulations.

## Sea transport (IMDG)

Not classified as dangerous in the meaning of transport regulations

# **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.

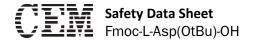
### **SARA 302**

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.



Rev 03 11/2020

**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**

Ī	Chemical Name	Common names and synonyms	CAS No	EC	Part
				Number	Number
Ī	FMOC-L-Aspartic acid 2-tert-butyl	FMOC-L-Aspartic acid \u03b2-	71989-14-5	None	A004
	ester	tert-butyl ester			

#### 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:

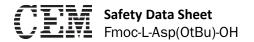
https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm

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



Part Number: 600704 Rev 03 11/2020

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.