SAFETY DATA SHEET

Revision Date 07/20/2015

1. PRODUCT AND COMPANY IDENTIFICATION

Product identifiers

Product name : Fmoc-Arg(Pmc)-OH Product Number : FR2135 Advanced ChemTech Brand

CAS-No. : 119831-72-0

Relevant identified uses of the substance or mixture and uses advised against Identified uses

Laboratory chemicals, Manufacture of substances 1.2

Details of the supplier of the safety data sheet 1.3 : Creosalus, Inc. Company

5609 Fern Valley Rd, Louisville, KY 40228 USA

: +1 800-456-1403 Telephone +1 502-968-1000

Emergency telephone number : +1 800-424-9300 Chemtrec 1.4

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture:

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

Skin irritation (Category 2), H315 Eye irritation (Category 2A), H319

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

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)

H315 Causes skin irritation. Causes serious eye irritation. H319 H335 May cause respiratory irritation.

Precautionary statement(s)

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. P264

Wash skin thoroughly after handling. P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/ eye protection/ face protection.

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

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing.

Call a POISON CENTER or doctor/ physician if you feel unwell. P312

Specific treatment (see supplemental first aid instructions on this label). P321 If skin irritation occurs: Get medical advice/ attention. P332 + P313

P337 + P313 If eye irritation persists: Get medical advice/ attention. Take off contaminated clothing and wash before reuse.
Store in a well-ventilated place. Keep container tightly closed. P362 P403 + P233 P405 Store locked up.

Dispose of contents/ container to an approved waste disposal plant P501

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Synonyms : $N\alpha$ -Fmoc-N ω -PMC-L-arginine

 $N\alpha\text{-Fmoc-}N\omega\text{-}(2,2,5,7,8\text{-pentamethylchromane-6-sulfonyl})\text{-L-arginine}$

C₃₅H₄₂N₄O₇S Formula Molecular Weight 662.80g/mole 119831-72-0 No ingredients are hazardous according to OSHA criteria.

No components need to be disclosed according to the applicable regulations. For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

Description of first aid measures

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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

1 OF 3

- **4.2 Most important symptoms and effects, both acute and delayed:** The most important known symptoms and effects are described in the labeling (see section 2.2) and/or in section 11
- 4.3 Indication of any immediate medical attention and special treatment needed: No data available

5. FIREFIGHTING 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 (NOx), Sulphur oxides
- **5.3** Advice for firefighters: Wear self contained breathing apparatus for fire fighting if necessary.
- 5.4 Further information: No data available

6. ACCIDENTAL RELEASE MEASURES

- **Personal Precautions, protective equipment, and emergency procedure:** 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: Do not let product enter drains.
- 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.

7. HANDLING AND STORAGE

- 7.1 Precautions for safe handling: Avoid contact with skin and eyes. Avoid formation of dust and aerosols. 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.

 Recommended storage temperature: -20 °C Keep in a dry place
- 7.3 Specific end use(s): Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.1 Control parameters
 - Components with workplace control parameters: Contains no substances with occupational exposure limit values.
- 8.2 Exposure controls

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

Personal protective equipment

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: 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: impervious clothing, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection: For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure: Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1	Information on basic physical and chemical properties
	a) Annearance

information on basic physical and chemical properties			
a) Appearance	Form: White to Off-White powder		
b) Odor	no data available		
c) Odor Threshold	no data available		
d) pH	no data available		
e) Melting point/freezing point	no data available		
 f) Initial boiling point and boiling range 	no data available		
g) Flash point	no data available		
h) Evaporation rate	no data available		
i) Flammability (solid, gas)	no data available		
j) Upper/lower flammability or explosive limits	no data available		
k) Vapor pressure	no data available		
I) Vapor density	no data available		
m) Relative density	no data available		
n) Water solubility	no data available		
 o) Partition coefficient: n- octanol/water 	no data available		
p) Auto-ignition temperature	no data available		
 q) Decomposition temperature 	no data available		
r) Viscosity	no data available		
s) Explosive properties	no data available		
t) Oxidizing properties	no data available		
Other safety information:	no data available		

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: Other decomposition products no data available. In the event of fire: see section 5

9.2

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity: No data available Inhalation: No data available Dermal: No data available

Skin corrosion/irritation: No data available

Serious eye damage/eye irritation: No data available Respiratory or skin sensitization: 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, 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

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: Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure: No data available

Aspiration hazard: No data available

Additional Information: RTECS: Nausea, Headache, Vomiting, narcosis

12. ECOLOGICAL INFORMATION

12.1 Toxicity: No data available

Persistence and degradability: No data available 12.2

Bioaccumulative potential: No data available 12.3

12.4 Mobility in soil: No data available

Results of PBT and vPvB assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted 12.5

12.6 Other adverse effects: No data available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

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

Contaminated packaging: Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US): Not dangerous goods IMDG: Not dangerous goods IATA: Not dangerous goods

15. REGULATORY INFORMATION

SARA 302 Components: SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302. SARA 313 Components: 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 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

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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 other reproductive harm.

16. OTHER INFORMATION

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

H315 Causes skin irritation. Causes serious eye irritation. H319 H335 May cause respiratory irritation

0

HMIS Rating Health hazard:

Chronic Health Hazard:

Flammability: 0 Physical Hazard 0 NFPA Rating Health hazard: n Fire Hazard: 0 Reactivity Hazard: 0

The above information is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. CreoSalus, Inc. shall not be liable for any damage resulting in the handling or from contact with the above product.