SAFETY DATA SHEET

Revision Date 05/12/2015

1. PRODUCT AND COMPANY IDENTIFICATION

Product identifiers

Product name : Fmoc-N-Me-Arg(Pbf)-OH **Product Number** : FR2161 : Advanced ChemTech Brand

CAS-No. : 913733-27-4

1.2

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

: Laboratory chemicals, Manufacture of substances

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

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. P362

P403 + P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up.

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

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Formula $C_{34}H_{40}N_4O_7S$ Molecular Weight 662.80g/mole CAS-No. : 913733-27-4

4. FIRST AID MEASURES

Description of first aid measures

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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.

Most important symptoms and effects, both acute and delayed: The most important known symptoms and effects are described in the 4.2 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

Extinguishing media 5.1

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

1 OF 3

- 5.2 5.3 Special hazards arising from the substance or mixture: Carbon oxides, nitrogen oxides (NOx), Sulphur oxides
- Advice for firefighters: Wear self contained breathing apparatus for fire fighting if necessary.
- 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
- Environmental precautions: Do not let product enter drains. 6.2 6.3
- Methods and materials for containment and cleaning up: 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.
- 6.4 Reference to other sections: For disposal see section 13.

7. HANDLING AND STORAGE

- Precautions for safe handling: Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust 7.1 ventilation at places where dust is formed. For precautions, see section 2.2
- Conditions for safe storage, including any incompatibilities: Keep container tightly closed in a dry and well-ventilated place. 7.2 Recommended storage temperature: -20 °C Keep in a dry place. Keep in a dry place
- Specific end use(s): Apart from the uses mentioned in section 1.2 no other specific uses are stipulated 7.3

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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 proper

Form: White to Off-White powder a) Appearance b) Odor no data available c) Odor Threshold no data available no data available **d)** pH e) Melting point/freezing point no data available f) Initial boiling point and boiling range no data available g) Flash point no data available no data available h) Evaporation rate 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

10. STABILITY AND REACTIVITY

- 10.1 Reactivity: No data available
- Chemical stability: Stable under recommended storage conditions. 10.2
- Possibility of hazardous reactions: No data available Conditions to avoid: No data available 10.3
- 10.4

Other safety information:

- Incompatible materials: Strong oxidizing agents 10.5
- Hazardous decomposition products: Other decomposition products no data available. In the event of fire: see section 5 10.6

no data available

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

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

FORM: 272C-004F4-00

9.2

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: Not available, to the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

Toxicity: No data available 12.1

12.2 Persistence and degradability: No data available

Bioaccumulative potential: No data available 12.3

Mobility in soil: No data available 12.4

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 13.1

Product: Contact a licensed professional waste disposal service to dispose of this material. 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.

Eye irritation Eye Irrit.

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

Skin Irrit. Skin irritation

STOT SE Specific target organ toxicity - single exposure

HMIS Rating

Health hazard: 2 Chronic Health Hazard: 0 Flammability: Physical Hazard 0 NFPA Rating Health hazard: 2 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.