

## SAFETY DATA SHEET

Revision Date 05/29/2024

### 1. PRODUCT AND COMPANY IDENTIFICATION

- 1.1 Product identifiers**  
 Product name : Fmoc-D-Phe(4-Cl)-OH  
 Product Number : FF3429  
 Brand : Advanced ChemTech  
 CAS-No. : 142994-19-2
- 1.2 Relevant identified uses of the substance or mixture and uses advised against**  
 Identified uses : Laboratory chemicals, Manufacture of substances
- 1.3 Details of the supplier of the safety data sheet**  
 Company : Advanced ChemTech  
 5609 Fern Valley Rd, Louisville, KY 40228 USA  
 Telephone : +1 833-317-5620  
 Fax : +1 502-968-1000
- 1.4 Emergency telephone number** : +1 800-424-9300 Chemtrec

### 2. HAZARDS IDENTIFICATION

- 2.1 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.  
 H319 Causes serious eye irritation.  
 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 breathing.  
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P312 Call a POISON CENTER or doctor/ physician if you feel unwell.  
 P321 Specific treatment (see supplemental first aid instructions on this label).  
 P332 + P313 If skin irritation occurs: Get medical advice/ attention.  
 P337 + P313 If eye irritation persists: Get medical advice/ attention.  
 P362 Take off contaminated clothing and wash before reuse.  
 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

- 3.1 Substances**  
 Synonyms : Fmoc-4-chloro-D-phenylalanine  
 Formula : C<sub>24</sub>H<sub>20</sub>CLNO<sub>4</sub>  
 Molecular Weight : 421.86g/mole  
 CAS-No. : 142994-19-2

Hazardous Components		
Component	Classification	Concentration
Fmoc-4-chloro-D-phenylalanine	Skin Irrit. 2; Eye Irrit. 2A; STOT SE 3; H315, H319, H335	-

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

### 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.

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**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 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), Hydrogen chloride gas
- 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

- 6.1 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: 2 - 8 °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) 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               |
| l) 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               |
| <b>9.2 Other safety information:</b>            | 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

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- 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

### 11. TOXICOLOGICAL INFORMATION

- 11.1 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 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:** Inhalation - May cause respiratory irritation.  
**Specific target organ toxicity - repeated exposure:** No data available  
**Aspiration hazard:** No data available  
**Additional Information:** RTECS: Not available  
 Central nervous system depression, prolonged or repeated exposure can cause:; Nausea, Headache, Vomiting, narcosis, anemia  
 Stomach - Irregularities - Based on Human Evidence

### 12. ECOLOGICAL INFORMATION

- 12.1 Toxicity:** 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 Results of PBT and vPvB assessment:** PBT/vPvB assessment not available as chemical safety assessment not required/not conducted  
**12.6 Other adverse effects:** No data available

### 13. DISPOSAL CONSIDERATIONS

- 13.1 Waste treatment methods**  
**Product:** Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.  
**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:** Acute Health Hazard, Chronic Health Hazard  
**Massachusetts Right to Know Components:** No components are subject to the Massachusetts Right to Know Act.  
**Pennsylvania Right to Know Components**
- | Fmoc-D-Phe(4-Cl)-OH | CAS-No.     | Revision Date |
|---------------------|-------------|---------------|
|                     | 142994-19-2 |               |
- New Jersey Right to Know Components**
- | Fmoc-D-Phe(4-Cl)-OH | CAS-No.     | Revision Date |
|---------------------|-------------|---------------|
|                     | 142994-19-2 |               |
- California Prop. 65 Components**  
 This product does not contain any chemicals known to the 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 Irrit.             | Eye irritation                                   |
| 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 |
| <b>HMIS Rating</b>     |  |
| Health hazard:         | 2  |
| Chronic Health Hazard: | *  |
| Flammability:          | 0  |

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Physical Hazard	0
<b>NFPA Rating</b>	
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. The information in this document is based on the present state of our knowledge and is applicable to the product regarding appropriate safety precautions. It does not represent any guarantee of the properties of the product. Advanced ChemTech shall not be liable for any damage resulting in the handling or from contact with the above product.