

MATERIAL SAFETY DATA SHEET

Section 1 - Identification

Product identifier	Fmoc-Glu(OtBu)-OH
Catalog No.	AS1318
Other identifiers	N-alpha-Fmoc-L-glutamic acid gamma-tert-butyl ester; Fmoc-L-glutamic acid 5-tert-butyl ester
Recommended use	Laboratory research and peptide synthesis, including Fmoc solid-phase peptide synthesis (SPPS).
Restrictions on use	For research use only. Not for human or veterinary use, therapeutic use, diagnostic use, food, household, or consumer applications.
Responsible party	Alan Scientific Inc.
U.S. address	9031 Shady Grove Court, Gaithersburg, MD 20877 U.S.
Contact	+1 888-757-1116 contactus@alanscientific.com www.alanscientific.com
Emergency telephone	+1 888-757-1116

Section 2 - Hazard(s) Identification

OSHA HCS classification	Not classified as hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200) based on currently available information reviewed for this document.
Signal word	None required.
Hazard statements	None required under OSHA HCS.
Pictograms	None required.
Precautionary statements	No OSHA HCS precautionary statements required. Use standard laboratory precautions and minimize dust generation.
HNOC	None known based on currently available information.
Unknown acute toxicity	Not applicable - substance, not a mixture.

Section 3 - Composition / Information on Ingredients

Substance / mixture	Substance
Chemical name	N-alpha-Fmoc-L-glutamic acid gamma-tert-butyl ester
CAS No.	71989-18-9
Molecular formula	C ₂₄ H ₂₇ NO ₆
Purity / concentration	Product-specific; refer to Certificate of Analysis (COA).
Hazard-contributing impurities	None known based on available information.

Section 4 - First-Aid Measures

Inhalation: Move to fresh air. Obtain medical attention if symptoms occur or persist. Skin contact: Remove contaminated clothing and wash skin thoroughly with soap and water. Eye contact: Rinse cautiously with water for several minutes; remove contact lenses if present and easy to do, then continue rinsing. Ingestion: Rinse mouth. If conscious, give water. Do not give anything by mouth to an unconscious person. Symptoms/effects: No specific symptoms are known from available data. Treat symptomatically and supportively.

Section 5 - Fire-Fighting Measures

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide, as appropriate for the surrounding fire. Specific hazards: Combustion or thermal decomposition may generate carbon oxides, nitrogen oxides, and sulfur oxides where applicable. Firefighter protection: Wear self-contained breathing apparatus and appropriate protective equipment when conditions warrant.

Section 6 - Accidental Release Measures

Avoid dust formation and inhalation. Provide ventilation and use appropriate personal protective equipment. Contain the spill, collect material by sweeping or vacuuming without generating dust, and place in a suitable container for disposal. Avoid unnecessary environmental release.

Section 7 - Handling and Storage

Handle using good laboratory practice. Avoid inhalation of dust and contact with eyes, skin, and clothing. Store tightly closed in a cool, dry, well-ventilated area. Protect from moisture and conditions incompatible with the recommended storage environment.

Section 8 - Exposure Controls / Personal Protection

Engineering controls: Use general laboratory ventilation. Personal protective equipment: laboratory coat, safety glasses, and suitable gloves. Hygiene measures: Wash thoroughly after handling. No occupational exposure limit has been identified in currently reviewed source materials for this substance.

Section 9 - Physical and Chemical Properties

Physical state	Solid
Appearance	White to off-white powder or crystalline solid
Odor	No data available
pH	No data available
Melting point	No data available
Boiling point / range	No data available
Flammability	No data available
Flash point	No data available
Explosion / flammability limits	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Vapor pressure	No data available
Density / relative density	No data available
Solubility	No data available
Partition coefficient	No data available
Kinematic viscosity	Not applicable to the supplied solid
Particle characteristics	No data available
Molecular weight	425.47 g/mol

Section 10 - Stability and Reactivity

Reactivity: No specific reactivity data available. Chemical stability: Stable under recommended storage conditions. Hazardous reactions: No hazardous polymerization or other hazardous reaction is known under recommended handling conditions. Conditions to avoid: Conditions inconsistent with recommended storage. Incompatible materials: Strong oxidizing agents. Hazardous decomposition products: Carbon oxides, nitrogen oxides, and sulfur oxides where applicable may form during combustion or thermal decomposition.

Section 11 - Toxicological Information

Likely exposure routes	Possible routes include inhalation of dust, eye contact, skin contact, and ingestion.
Acute toxicity	No numerical acute-toxicity data available for the supplied substance.
Skin corrosion / irritation	No data available.
Eye damage / irritation	No data available.
Respiratory / skin sensitization	No data available.
Germ cell mutagenicity	No data available.
Carcinogenicity	Not identified as a listed carcinogen by IARC, NTP, or OSHA based on currently available information.
Reproductive toxicity	No data available.
STOT - single exposure	No data available.
STOT - repeated exposure	No data available.
Aspiration hazard	No data available; aspiration-hazard classification is not applicable to the supplied solid based on available information.
Additional information	Chemical, physical, and toxicological properties have not been fully investigated. Use good laboratory safety practice.

Section 12 - Ecological Information

Ecotoxicity: No data available. Persistence / degradability: No data available. Bioaccumulation: No data available. Mobility in soil: No data available. Other adverse effects: Avoid unnecessary environmental release.

Section 13 - Disposal Considerations

Product / residues: Dispose in accordance with applicable federal, state, and local requirements. Do not mix with incompatible waste streams. Contaminated packaging: Dispose in accordance with applicable requirements; handle uncleaned containers as product residue.

Section 14 - Transport Information

Transport status	Not regulated as dangerous goods under U.S. DOT (49 CFR), IATA, or IMDG based on currently available information.
UN number	Not assigned.
Proper shipping name	Not assigned.
Hazard class	Not assigned.
Packing group	Not assigned.
Environmental hazards	Not identified.
Special precautions	Handle in accordance with good laboratory and industrial hygiene practice.

Section 15 - Regulatory Information

U.S. federal status	This document is prepared in consideration of OSHA HCS (29 CFR 1910.1200). No additional federal regulatory status is assigned here based on currently reviewed information.
State / local considerations	Users remain responsible for compliance with applicable regional requirements.

Section 16 - Other Information

Revision	2.4
Date of preparation / revision	2026-09-05
Revision summary	Template reformatted to prevent text and border overlap; 9031 Gaithersburg address retained; no-logo MSDS format retained.
Data / assessment basis	Alan Scientific product information; current supplier safety documentation; PubChem substance records where available; OSHA HCS (29 CFR 1910.1200).

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