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Section 1-Product information

Product name	Fmoc-D-Glu(OtBu)-OH
Product Cat. No.	C01531

Section 2-Composition / information on ingredients

Substance/Preparation	Substance
Ingredient Name	N-alpha-Fmoc-D-glutamic acid gamma-t.-butyl ester
CAS No.	104091-08-9
Formula	C ₂₄ H ₂₇ NO ₆

Section 3- Hazards identification

Physical/chemical hazards	Not applicable
Human health hazards	No specific hazard

Section 4- First-aid measures

First-Aid measures	
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Ingestion	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.
Skin Contact	In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Aggravating conditions	Repeated or prolonged exposure is not known to aggravate medical condition.

Section 5- Fire-fighting measures

Flammability of the Product	May be combustible at high temperature.
Extinguishing Media Suitable	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.
Hazardous thermal (de)composition	These products are carbon oxides (CO, CO ₂), nitrogen oxides (NO, NO ₂ ...).
Special fire-fighting procedures	Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.
Protection of fire-fighters	Be sure to use an approved/certified respirator or equivalent.

Section 6- Accidental release measures

Personal precautions	Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
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Small Spill and Leak	Use appropriate tools to put the spilled solid in a convenient waste disposal container.
Large Spill and Leak	Use a shovel to put the material into a convenient waste disposal container.

Section 7-Handling and storage

Handling	Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not breathe dust.
Storage	Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 20°C (68°F).
Packaging materials Recommended use	Use original container.

Section 8-Exposure controls/personal protection

Engineering measures	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
Hygiene measures	Wash hands after handling compounds and before eating, smoking, using lavatory, and at the end of day.
Personal protective equipment	Skin and body: Lab coat Eyes: Safety glasses Protective Clothing (Pictograms):



Section 9- Physical and chemical properties

Physical state	Solid
Color	White to yellowish (Light)
Melting point	80 to 95°C (176 to 203°F)
Molecular Weight	425.5 g/mole
Solubility	Easily soluble in methanol. Insoluble in cold water.
Flash point	Not available
Explosive properties	Risks of explosion of the product in presence of mechanical impact: Not available Risks of explosion of the product in presence of static discharge: Not available

Section 10- Stability and reactivity

Stability	The product is stable.
Conditions to avoid	Not available
Hazardous Decomposition Products	These products are carbon oxides (CO, CO ₂), nitrogen oxides (NO, NO ₂ ...).

Section 11- Toxicological information

Skin irritation	Not available
Acute toxicity	LD50: Not available LC50: Not available
Chronic toxicity	Repeated or prolonged exposure is not known to aggravate medical condition.
Other Toxic Effects on Humans	Not available
Carcinogenic effects	Not available
Mutagenic effects	Not available
Reproduction toxicity	Not available
Teratogenic effects	Not available

Section 12- Ecological information

Ecotoxicity	Not available
Toxicity of the Products of Biodegradation	The product itself and its products of degradation are not toxic.

Section 13- Disposal considerations

Methods of disposal; Waste of residues;	Waste must be disposed of in accordance with federal, state and local environmental control regulations.
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Section 14- Transport information

Land - Road/Railway	Not controlled under ADR (Europe)
ADR/RID Class	
Sea IMDG Class	Not controlled under IMDG
Air IATA-DGR Class	Not controlled under IATA
Special Provisions for Transport	Not applicable

Section 15- Regulatory information

EU Regulations	This product is not classified according to the EU regulations.
Risk Phrases	
U.S. Federal Regulations	TSCA: No products were found. SARA 302/304/311/312 extremely hazardous substances: No products were found. SARA 302/304 emergency planning and notification: No products were found. SARA 302/304/311/312 hazardous chemicals: No products were found. SARA 311/312 MSDS distribution - chemical inventory - hazard identification: No products were found. SARA 313 toxic chemical notification and release reporting: No products were found. Clean Water Act (CWA) 307: No products were found. Clean Water Act (CWA) 311: No products were found. Clean air act (CAA) 112 accidental release prevention: No products were found. Clean air act (CAA) 112 regulated flammable substances: No products were found. Clean air act (CAA) 112 regulated toxic substances: No products were found.
HCS Classification	Not controlled under the HCS (United States)
State Regulations	Not controlled under WHMIS (Canada)

Section 16- Other information

GenScript corporation MSDS is believed to be correct but only used as a guide for experienced personnel, GenScript shall not be held liable for any damage resulting from the handling or from contact with the above product.