

MATERIAL SAFETY DATA SHEET

Section 1 - Identification

Product identifier	Fmoc-AEPipAc-OH.2HCl
Catalog No.	AS4033
Other identifiers / description	4-[2-(Fmoc-amino)ethyl]piperazin-1-ylacetic acid dihydrochloride
Recommended use	Laboratory research; peptide, linker, PNA, conjugate or protected-fragment synthesis as applicable.
Restrictions on use	For research use only. Not for human or veterinary therapeutic, diagnostic, 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
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Section 2 - Hazard(s) Identification

OSHA HCS / GHS classification	Acute Toxicity (Oral) Category 4; Skin Irritation Category 2; Eye Irritation Category 2; Specific Target Organ Toxicity - Single Exposure Category 3 (respiratory tract irritation), based on conservative current supplier information reviewed for this draft.
Signal word	Warning
Pictograms	GHS07 - Exclamation mark
Hazard statements	H302: Harmful if swallowed. H315: Causes skin irritation. H319: Causes serious eye irritation. H335: May cause respiratory irritation.
Precautionary statements	Avoid breathing dust. Wash thoroughly after handling. Wear suitable gloves and eye protection. If exposed or concerned, follow applicable first-aid guidance and seek medical advice as needed.
Classification note	Supplier hazard classifications can differ. Final released MSDS should remain aligned with the actual upstream lot-specific safety documentation.

Section 3 - Composition / Information on Ingredients

Substance / mixture	Substance
Chemical / product identity	4-[2-(Fmoc-amino)ethyl]piperazin-1-ylacetic acid dihydrochloride
CAS No.	204320-65-0
Molecular formula	C23H29Cl2N3O4
Molecular weight	482.40 g/mol
Purity / concentration	Product-specific; refer to the Certificate of Analysis (COA).
Hazard-contributing impurities	No product-specific hazardous impurity information assigned in this draft; refer to lot-specific supplier documentation.

Section 4 - First-Aid Measures

Inhalation: Move to fresh air and obtain medical attention if symptoms occur or persist. Skin contact: Remove contaminated clothing and wash 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. Do not induce vomiting unless directed by medical personnel. Obtain medical advice if unwell. Treat symptomatically and supportively.

Section 5 - Fire-Fighting Measures

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide as appropriate for the surrounding fire. Thermal decomposition may generate carbon oxides, nitrogen oxides, halogen-containing gases where applicable, and other irritating fumes. Firefighters should use self-contained breathing apparatus and suitable protective equipment when conditions warrant.

Section 6 - Accidental Release Measures

Avoid dust formation and inhalation. Provide appropriate ventilation and personal protective equipment. Collect material carefully without generating dust and place in a suitable closed container for disposal. Avoid unnecessary release to drains or the environment.

Section 7 - Handling and Storage

Handle using good laboratory practice. Avoid breathing dust and unnecessary contact with skin and eyes. Keep container tightly closed, dry and protected from contamination. Follow the product-specific label/COA for storage temperature and protect sensitive protected intermediates from moisture, strong oxidants and incompatible conditions.

Section 8 - Exposure Controls / Personal Protection

Occupational exposure limits	No product-specific OSHA PEL or ACGIH TLV identified in currently reviewed information.
Engineering controls	Use general laboratory ventilation; local exhaust may be appropriate where dust is generated.
Eye / face protection	Safety glasses or suitable laboratory eye protection.
Skin / body protection	Wear suitable chemical-resistant gloves and laboratory clothing.
Respiratory protection	Normally not required for controlled small-scale handling; if dust is generated and ventilation is insufficient, use an appropriate particulate respirator.
Hygiene measures	Wash hands after handling. Do not eat, drink or smoke in chemical-handling areas.

Section 9 - Physical and Chemical Properties

Physical state	Solid
Appearance	Powder or solid; lot-specific appearance may vary
Odor	No data available
pH	No data available
Melting point / range	No reliable product-specific data assigned
Boiling point / range	No data available
Flammability	No reliable product-specific data assigned
Flash point	No data available
Vapor pressure	No data available
Solubility	Product-specific; refer to technical or lot documentation where available
Molecular weight	482.40 g/mol

Section 10 - Stability and Reactivity

No specific reactivity data are available for the supplied research material. Stable under recommended storage conditions when properly handled. Avoid incompatible conditions, moisture where relevant to protected/salt intermediates, excessive heat and strong oxidizing agents. Hazardous decomposition products may include carbon oxides, nitrogen oxides and other compound-specific fumes.

Section 11 - Toxicological Information

Likely exposure routes	Inhalation of dust, eye contact, skin contact and ingestion.
Acute toxicity	See Section 2; numerical product-specific acute toxicity data may be unavailable.
Skin corrosion / irritation	See Section 2; otherwise data may be limited.
Eye damage / irritation	See Section 2; otherwise data may be limited.
Respiratory / skin sensitization	No reliable product-specific data assigned unless stated in Section 2.
Germ cell mutagenicity	No data available.
Carcinogenicity	No product-specific listing assigned here based on currently reviewed information.
Reproductive toxicity	No data available.
STOT	See Section 2; otherwise no data available.
Additional information	Chemical and toxicological properties may not have been fully investigated. Handle using good laboratory safety practice.

Section 12 - Ecological Information

Product-specific ecotoxicity, persistence, bioaccumulation and mobility data are generally unavailable for these research building blocks. Avoid unnecessary environmental release.

Section 13 - Disposal Considerations

Dispose of product, residues and contaminated packaging in accordance with applicable federal, state and local requirements. Do not mix with incompatible waste streams. Laboratory waste classification should consider the actual material, solvent and contamination state.

Section 14 - Transport Information

Transport status	Not regulated as dangerous goods under U.S. DOT, IATA or IMDG based on currently available information reviewed for this draft.
UN number	Not assigned based on currently available information.
Proper shipping name	Not assigned.
Hazard class	Not assigned.
Packing group	Not assigned.
Special precautions	Confirm against the current upstream lot-specific MSDS and carrier/jurisdiction requirements before shipment.

Section 15 - Regulatory Information

OSHA HCS	Prepared with reference to the OSHA Hazard Communication Standard (29 CFR 1910.1200).
U.S. chemical-control status	Inventory/import status is not assigned solely from this research-use MSDS. Confirm applicable TSCA/R&D and transaction-specific obligations before import or commercial use.
State / local requirements	Users are responsible for confirming applicable state and local requirements.

Section 16 - Other Information

Revision	1.0
Date of preparation / revision	2026-09-06
Document format	Alan Scientific no-logo MSDS template; 9031 Gaithersburg responsible-party address.
Data / assessment basis	Alan Scientific product identity; current publicly available supplier/database information; OSHA HCS framework. Final released document should remain aligned with actual upstream lot-specific safety documentation.
Identity note	CAS, formula and molecular weight were cross-checked for this product before draft preparation.

Safety information notice: This information is provided in good faith for safe handling of the supplied research material based on information reasonably available at the revision date. It is not a product specification or warranty. Users are responsible for suitability, controls and regulatory obligations for their specific use.