Technical Data Sheet

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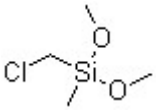
Silfluo LS-8121

Alpha-Chloromethyl Dialkoxy Silane Intermediate

Description:

Silfluo LS-8121 is Chloromethylmethyldimethoxysilane, an alpha-chloromethyl dialkoxy silane intermediate.
The molecule contains one chloromethyl group and one methyldimethoxysilyl group.
The chloromethyl group provides C – Cl functionality for selected nucleophilic substitution reactions.
The methyldimethoxysilyl group hydrolyzes and participates in siloxane formation under suitable moisture, pH, and catalyst conditions.
The dialkoxysilane structure gives lower alkoxy functionality than trialkoxysilanes, useful in systems where controlled siloxane formation or linear chain modification is required.
Used as chemical intermediate for preparing alpha-functional silanes, modified siloxane intermediates, and specialty organosilicon compounds.
Reaction conversion, impurity profile, by-product formation, and downstream performance require verification under target synthesis conditions.

Typical Physical Properties

Silfluo Code:	LS-8121
Chemical Name:	Chloromethyl(methyl)dimethoxysilane
Synonyms	Chloromethylmethyldimethoxysilane
CAS No. :	2212-11-5
EINECS No. :	606-938-2
Molecular Formula:	$C_4H_{11}ClO_2Si$
Molecular Weight:	154.67
Appearance:	Colorless transparent liquid
Purity (by GC, %):	97
Density (25°C, g/cm³):	1.064
Refractive Index (n25.D):	1.4123
Boiling Point:	128.1°C
Flash Point:	55°C Closed Cup
Chemical Structure:	

Applications:

1. Alpha-functional silane synthesis

Used as chemical intermediate for preparing alpha-functional silanes through controlled substitution and silane modification reactions. Verify reaction conditions, residual chloride, by-product formation, and product

purity by synthesis testing.

2. Modified siloxane intermediate development

Used as intermediate for introducing chloromethyl or methyldimethoxysilyl functionality into siloxane intermediates. Verify compatibility, reaction selectivity, and downstream material properties in the target process.

3. Organosilicon intermediate synthesis

Used in synthesis routes requiring both chloromethyl functionality and dialkoxysilane functionality. Confirm final structure and impurity profile by analytical testing.

4. Polymer grafting research

Used as reactive intermediate in polymer modification and grafting studies. Verify grafting efficiency, side reactions, and final polymer properties before scale-up.

5. Surface treatment precursor

Used as precursor in the preparation of surface treatment agents. Direct substrate application requires careful testing due to chloromethyl functionality and moisture sensitivity.

Packing

In 25kg pail, 200kg drum and 1000kg IBC.

Safety and Storage

Store in a cool, dry, well-ventilated environment. Keep away from direct sunlight, heat, sparks, and open flames.

The product is highly sensitive to ambient moisture; rapid hydrolysis occurs if containers are improperly sealed.

Keep away from strong acids and alkalis; both catalyze unwanted side reactions.

Shelf life: 12 months minimum from manufacture date when stored at ≤25° C in tightly sealed original unopened containers.