



KALPASTHANA LIFE CARE PRODUCTS PVT. LTD.

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TECHNICAL DATA SHEET

Methyl Adipoyl Chloride

CAS No: 2110-39-6

PRODUCT DESCRIPTION

A high-purity mono-ester acid chloride intermediate (commonly known as Methyl Adipoyl Chloride or Monomethyl Adipoyl Chloride) serving as a versatile and reactive building block for selective polymer synthesis, pharmaceutical derivatives, and fine chemicals. Featuring both a highly reactive acid chloride group and a stable methyl ester group, this compound allows for selective mono-acylation and functionalization reactions. Kalpasthana Life Care Products manufactures premium grade Methyl Adipoyl Chloride under GMP-compliant protocols at our advanced Humnabad facility.

SPECIFICATIONS

Product Name	Methyl Adipoyl Chloride
Synonyms / Alternate Names	Monomethyl adipoyl chloride, Methyl 5-(chlorocarbonyl)pentanoate, Adipic acid monomethyl ester chloride, Methyl 6-chloro-6-oxohexanoate, Monomethyl adipate acid chloride, Adipoyl chloride monomethyl ester
CAS Number	2110-39-6
Molecular Formula	C ₇ H ₁₁ ClO ₃
Molecular Weight	178.61 g/mol
Appearance	Colorless to light yellow liquid
Purity (GC)	≥ 98.0%
Boiling Point	110–113°C at 12 mmHg

APPLICATIONS & USAGE

Methyl Adipoyl Chloride (Methyl 5-(chlorocarbonyl)pentanoate) is a highly reactive asymmetric building block. It is the primary key intermediate for the commercial synthesis of Alpha Lipoic Acid (Thioctic Acid). The differential reactivity of the acid chloride end versus the protected methyl ester enables clean, selective mono-acylation and chain-extension reactions, making it vital in polymer modifying and API synthesis.

- Alpha Lipoic Acid Synthesis: Reacts selectively with ethylene and sulfur compounds to construct the core structure of Alpha Lipoic Acid.
- Protected Ester Reactivity: Highly reactive carbonyl chloride allows rapid coupling while the methyl ester remains intact for subsequent steps.
- Polymer Modifications: Used as an acylating agent to graft ester-terminated alkyl chains onto starch, cellulose, and high-performance polyamides.

DISCLAIMER & SAFETY

Disclaimer: The information contained in this Technical Data Sheet is accurate to the best of our knowledge. It is provided for informational purposes only. The user assumes all risk and liability for the product's use in manufacturing or commercial applications. Products are intended for industrial manufacturing and laboratory research purposes only. Please refer to the Material Safety Data Sheet (MSDS) for detailed safety, handling, storage, and disposal guidelines.

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