Technical Data Sheet

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Silfluo LS-CHTS

Cycloalkyl Silane (External Electron Donor)

Description:

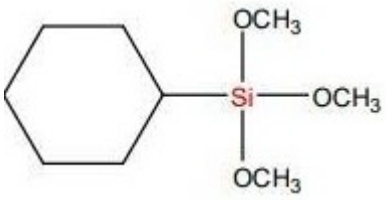
Silfluo LS-CHTS is Cyclohexyltrimethoxysilane, a trifunctional cycloalkyl-functional trimethoxysilane. The molecule contains one cyclohexyl group and three hydrolyzable methoxy groups on silicon.

The bulky cyclohexyl group provides steric coordination with active sites in $MgCl_2$ -supported Ziegler-Natta catalyst systems, functioning as an external electron donor (selectivity control agent). Used primarily as external electron donor in Ziegler-Natta propylene polymerization catalyst systems for isotactic polypropylene production.

Typical Physical Properties

Silfluo Code:	LS-CHTS
Chemical Name:	Cyclohexyltrimethoxysilane
Synonyms	Trimethoxycyclohexylsilane
CAS No. :	17865-54-2
EINECS No. :	605-828-1
Molecular Formula:	$C_9H_{20}O_3Si$
Molecular Weight:	204.34
Appearance:	Colorless transparent liquid
Purity (by GC, %):	98.0 min
Density (25°C, g/cm³):	1.010 - 1.030
Refractive Index (n25/D):	1.4270-1.4370
Boiling Point:	217°C
Flash Point:	84°C Closed Cup

Chemical Structure:



Applications:

1. Polypropylene (PP) polymerization — external electron donor

Used as external electron donor in $MgCl_2$ -supported Ziegler-Natta catalyst systems for isotactic polypropylene production.

2. Ziegler-Natta catalyst formulation

Used in catalyst preparation and performance tuning for custom Ziegler-Natta systems in propylene polymerization processes.

Packing

Available in 20kg pails, 180kg drums.

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Safety and Storage

Store under nitrogen in a cool, dry, well-ventilated place away from direct sunlight, heat, and ignition sources. Keep containers hermetically sealed.
Reacts with atmospheric moisture; hydrolysis releases methanol and forms silicone gel. Maintain dry, inert atmosphere during all handling and transfer operations.
Avoid contact with strong acids, alkalis, and oxidizing agents.
Shelf life: 12 months minimum from manufacture date in original unopened containers under nitrogen protection.

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