# Technical Data Sheet

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# Silfluo LS-DCPDMS

Silane Electron Donor (Donor-D)

## Description

Silfluo LS-DCPDMS is a high-purity, specialized organosilicon compound, globally recognized in the polyolefin industry as Donor-D (Dicyclopentyldimethoxysilane). Engineered as a premium external electron donor (Selectivity Control Agent, SCA), it is utilized in absolute synergy with advanced Ziegler-Natta catalysts during the gas-phase or bulk polymerization of propylene. By selectively coordinating with the active catalytic sites, it precisely dictates the stereochemistry of the growing polymer chain, ensuring the production of highly isotactic polypropylene (PP) with exceptional catalytic yield, optimal stereoregularity, and tailored molecular weight distribution.

## Typical Physical Properties

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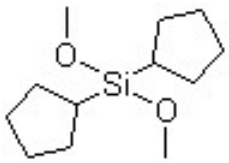
|---|---|
| Silfluo Code: | LS-DCPDMS |
| Chemical Name: | Dicyclopentyldimethoxysilane |
| Synonyms | Dimethoxydicyclopentylsilane; Donor-D; D-Donor; |
| CAS No. : | 126990-35-0 |
| EINECS No. : | 404-370-8 |
| Molecular Weight: | 228.41 |
| Appearance: | Colorless transparent liquid |
| Density (ρ20°C, g/cm³) | 0.99 |
| Refractive Index (n25/D) | 1.4580~1.4680 |
| Purity: | 99% min |
| Boiling Point: | 251 °C |
| Flash Point: | 102 °C (Closed Cup) |
| Chemical Structure: |  |



## Features

1. Supreme stereoselectivity control, acting as a highly effective Selectivity Control Agent (SCA) to drastically maximize the isotactic index and crystallinity of the resulting polypropylene matrix.
2. Significant catalyst yield enhancement, optimizing Ziegler-Natta catalytic kinetics to increase the volume of polymer produced per unit weight of the titanium/magnesium catalyst.
3. Precise molecular weight distribution (MWD) modulation, improving the melt flow index (MFI) and dynamic processability of the resin during complex extrusion and injection molding.
4. Outstanding thermal stability and consistent electron-donating performance throughout rigorous,

high-temperature industrial polymerization cycles.

## Applications

1. High-Stiffness Polypropylene (PP) Resins: Serves as the critical external electron donor in advanced catalytic systems to manufacture highly isotactic, high-rigidity PP resins utilized in automotive interior parts, home appliance housings, and durable structural components.
2. Advanced Injection Molding Grades: Enables the precise stereochemical control required to produce high-crystallinity, high-flow PP homopolymers and copolymers for thin-wall injection molding and complex premium consumer packaging.
3. High-Tensile Polypropylene Films: Deployed within the catalytic process for producing biaxially oriented polypropylene (BOPP) and cast polypropylene (CPP) films, ensuring exceptional tensile strength, optical clarity, and moisture barrier properties.
4. Specialty Polymer Compounding: Acts as an essential kinetic regulator to tailor polymer chain architecture, directly enhancing the mechanical properties, heat deflection temperature, and thermal dimensional stability of advanced polyolefin composites.

## Packaging

In 20kg pail,180kg drum and 900kg IBC

## Safety and Storage

Keep away from heat and open flame. When stored at or below 25°C in the original unopened containers, this product has a usable life of 24 months from the date of production (200L drum)