LANDU

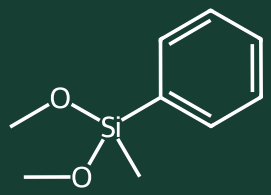
Technical data sheet
TDS-LEGRA-6031-L-EN
Revision 1.0, November 2026

LANDUSIL LEGRA

6031-L

Methylphenyldimethoxysilane

Methylphenyl dimethoxy precursor for selected silicone-fluid and resin synthesis



Chemical identity

Chemical name
Methylphenyldimethoxysilane

CAS number
3027-21-2

EC number
221-192-4

Structure
$CH_3(C_6H_5)Si(OCH_3)_2$

Molecular formula
$C_9H_{14}O_2Si$

Molecular weight
182.29 g/mol

Hydrolysis by-product
Methanol

Product description

LANDUSIL LEGRA 6031-L is methylphenyldimethoxysilane, an organosilane with one methyl group, one phenyl group and two hydrolyzable methoxy groups on silicon. It is a precursor for developing methylphenyl-containing siloxane fluids, resins and selected treatment systems.

Hydrolysis releases methanol and generates silanols for condensation. The molecule can provide a methylphenyl D-type unit, while conversion, chain ends, comonomers and molecular distribution determine the resulting material. Follow residual methoxy and silanol groups, alcohol removal and storage behavior. The starting silane contains no vinyl, amino, epoxy or Si–H function; these require separately selected ingredients.

Features and benefits

- One methyl and one phenyl group attached to silicon
- Two methoxy groups provide condensation sites
- Potential methylphenyl D-type siloxane building unit
- Precursor for separately qualified fluids and resins
- Methoxy hydrolysis releases methanol

Specification

Property	Unit	Value	Test method
Appearance		**Colorless to light yellow clear liquid**	Visual
Purity (GC)	%	**min. 98.0**	Gas chromatography
Refractive index, nD25	–	**1.4720 – 1.4820**	Refractometry

Tested on every batch and reported on the Certificate of Analysis.

Typical properties

Boiling point, 750 mmHg	approx. 199 °C
Flash point, method not reported	approx. 76 °C

For guidance only; not part of the specification.

Applications

Silicone-fluid and resin development
Combine with selected precursors, catalysts and end-group sources. Characterize the resulting methylphenyl siloxane for composition, viscosity and residual reactive groups.

Mineral, steel and heat-exposure coatings
Precursor for a synthesized binder. Evaluate the complete coating with its intended substrate, fillers and cure for adhesion, defects and exposure behavior.

Fumed-silica treatment studies
Candidate for a defined surface-treatment process before rubber formulation. Assess unbound material, alcohol, aggregation, storage and reinforcement in the actual compound.

Optical-resin development
Upstream material for a defined resin and cure system. Measure refractive index, transmission, yellowing and assembly reliability under stated conditions.

Mica binders and electrical insulation
Component for a separately qualified resin. Assess impregnation, dielectric behavior, adhesion and the finished composite after thermal and moisture exposure.

Guidelines for use

Controlled synthesis	Choose comonomers, catalyst and end groups for the intended structure. Monitor conversion, methanol removal, residual methoxy or silanol groups and molecular distribution.
Prehydrolysis and oligomers	Establish water addition, reaction time and temperature for the selected route. Follow phase separation, viscosity and retained reactivity before further processing or storage.
Particle and coating trials	Determine treatment concentration, deposition and cure in trials. Remove excess material and alcohol as required and test the prepared filler, resin or coating in its intended system.

These levels are starting points. Determine the optimum level and method in trials under your own production conditions.

Handling and safety

- Combustible liquid. Keep away from heat and ignition sources and ventilate transfer, reaction and drying operations.
- Risk of serious eye injury and skin irritation. Wear chemical-resistant gloves, splash goggles and face protection.
- Harmful if swallowed; may irritate the respiratory tract. Avoid ingestion and breathing mist.
- Hydrolysis releases toxic methanol. Keep bulk liquid dry and control alcohol-vapor exposure during processing and curing.
- Read the Safety Data Sheet before use.

Storage and shelf life

Store at or below 25 °C in tightly sealed original containers in a dry, ventilated place protected from moisture, sunlight and ignition sources. Reseal promptly after dry transfer. Shelf life is 12 months in unopened containers.

Packaging

25 kg plastic drum, 200 kg steel drum, 1,000 kg IBC. Other pack sizes on request.

The information in this data sheet reflects our current knowledge and is given in good faith. It is not a guarantee of properties or of suitability for a particular use, and it does not release users from testing the product for their own application and process. Users are responsible for complying with applicable laws, regulations and third-party rights. Only the values under Specification are binding, as confirmed on the Certificate of Analysis. This edition supersedes all previous editions. For safety information, see the current Safety Data Sheet. © 2026 LANDUSIL. All rights reserved. LANDUSIL and its product series names are trademarks of LANDUSIL. No part of this document may be reproduced, modified or redistributed without prior written permission.