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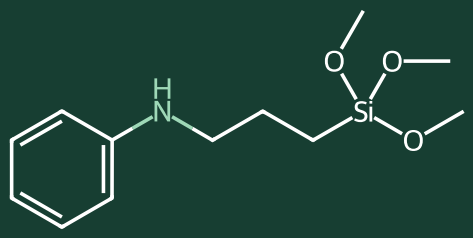
**Technical data sheet**
TDS-LEGRA-1051-L-EN
Revision 1.0, November 2026

LANDUSIL LEGRA

# 1051-L

## N-Phenyl-3-aminopropyltrimethoxysilane

N-phenyl secondary amino silane for selected resin and mineral interfaces




### Chemical identity

Chemical name
**N-Phenyl-3-aminopropyltrimethoxysilane**

CAS number
**3068-76-6**

EC number
**221-328-2**

Structure
$C_6H_5NH(CH_2)_3Si(OCH_3)_3$

Molecular formula
$C_{12}H_{21}NO_3Si$

Molecular weight
**255.39 g/mol**

Hydrolysis by-product
**Methanol**

## Product description

LANDUSIL LEGRA 1051-L is N-phenyl-3-aminopropyltrimethoxysilane. It contains one secondary amino group with one N–H bond and three methoxy groups on silicon. The phenyl group is attached to nitrogen.

Hydrolysis of the methoxy groups releases methanol and forms silanols that can condense with suitable inorganic surfaces or other silanol species. The N-phenyl amine has a different chemical environment from a primary or N-alkyl amine. Resin reaction, hydrolysis and condensation therefore need separate evaluation. This structure alone does not establish rapid NCO conversion, a temperature rating or the properties of a finished composite.

## Features and benefits

- One N-phenyl secondary amino group with one initial N–H bond
- Three methoxy groups provide silanol-forming sites
- Hydrolysis releases methanol
- Use in selected primers, binders and mineral treatments
- Evaluate the actual resin reaction and conversion endpoint

## Specification

| Property | Unit | Value | Test method |
|---|---|---|---|
| Appearance | | **Colorless to light yellow, clear liquid** | Visual |
| Purity (GC) | % | **min. 95.0** | Gas chromatography |
| Refractive index, $n_D^{25}$ | – | **1.5060 ± 0.0050** | Refractometry, 25 °C |

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

## Typical properties

| | |
|---|---|
| Boiling point, 760 mmHg | approx. 310 °C |
| Flash point, closed cup | approx. 110 °C |
| Density, 25 °C | approx. 1.07 g/cm³ |
| Behavior in water | Hydrolyzes and releases methanol |

For guidance only; not part of the specification.

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## Applications

**Resin-bonded sand**
Interface ingredient for selected compatible sand binders; assess resin, catalyst balance, working time and conditioned strength.

**Primers, coatings and sealants**
Separate treatment or formulation ingredient for suitable glass, mineral and metal oxide surfaces and compatible organic binders.

**Reactive NCO intermediates**
Screen with a defined prepolymer and catalyst; measure conversion and retained methoxy functionality before formulation use.

**Phenolic-bonded abrasives**
Coupling candidate at selected abrasive–binder interfaces; qualify the manufacturing process and complete article.

**Mineral-filled resins and pigments**
Surface treatment of suitable inorganic particles; assess dispersion, flow, cure and retention after conditioning.

**Glass-fiber and fabric treatments**
Component of compatible sizing, finishing or prepreg development; qualify the matrix and full process separately.

## Guidelines for use

| | |
|---|---|
| **Primer or filler treatment** | Apply a compatible dilute treatment to a prepared substrate or agitated particles. Establish concentration, moisture balance, drying and the interval before bonding or compounding. |
| **Resin formulation** | Select the addition side using the actual binder and catalyst chemistry. Compare fresh and stored viscosity, working time, cure and conditioned adhesion. |
| **NCO reaction screening** | Set amine/NCO balance, addition order and temperature for the actual prepolymer. Follow residual NCO, viscosity and molecular distribution; verify the intended conversion endpoint. |

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

## Handling and safety

- Harmful if swallowed. Avoid skin and eye contact; exposure may cause burns or allergic reactions. Wear suitable gloves, protective clothing and eye/face protection.
- Use exposure controls for suspected cancer and genetic-damage hazards and organ damage from repeated exposure. Avoid breathing vapor or mist.
- Hydrolysis releases toxic methanol. Provide ventilation and control water addition and residual volatiles.
- Keep away from heat and ignition sources. Prevent release to drains and surface water.
- Read the Safety Data Sheet before use.

## Storage and shelf life

Store in original, tightly closed containers in a cool, dry, well-ventilated place away from moisture and ignition sources. Shelf life is 12 months in unopened containers under these conditions. Use promptly after opening and reseal after dispensing.

## Packaging

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

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