LANDU

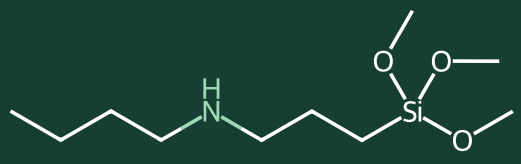
Technical data sheet
TDS-LEGRA-1061-L-EN
Revision 1.0, November 2026

LANDUSIL LEGRA

1061-L

N-(n-Butyl)-3-aminopropyltrimethoxysilane

Secondary amino silane for controlled polymer modification and interfaces



Chemical identity

Chemical name
N-(n-Butyl)-3-aminopropyltrimethoxysilane

CAS number
31024-56-3

EC number
250-437-8

Structure
n-$C_4H_9NH(CH_2)_3Si(OCH_3)_3$

Molecular formula
$C_{10}H_{25}NO_3Si$

Molecular weight
235.40 g/mol

Hydrolysis by-product
Methanol

Product description

LANDUSIL LEGRA 1061-L is N-(n-butyl)-3-aminopropyltrimethoxysilane. It contains one secondary amino nitrogen with one N–H bond and three methoxy groups on silicon. The straight-chain butyl group is attached to nitrogen.

The amino group can react with suitable NCO-terminated prepolymers to form a urea linkage. Methoxy hydrolysis releases methanol and forms silanols for later condensation. Polymer attachment and silicon condensation require separate controls. Establish reaction equivalents, conversion, free silane and storage behavior using the actual recipe; the structure alone does not establish color stability or finished-product performance.

Features and benefits

- One N-n-butyl secondary amine with one initial N–H bond
- Three methoxy groups provide silanol-forming sites
- Amino–NCO reaction provides a urea linkage route
- Suitable for selected primers, binders and mineral treatments
- Evaluate residual NCO, free silane and moisture-cure behavior

Specification

Property	Unit	Value	Test method
Appearance		**Colorless to light yellow, clear liquid**	Visual
Purity (GC)	%	**min. 95.0**	Gas chromatography
Color	Pt-Co	**max. 100**	Platinum-cobalt color comparison
Density, 20 °C	g/cm³	**0.935 – 0.955**	Densimetry, 20 °C
Refractive index, n_D^{25}	–	**1.4195 – 1.4295**	Refractometry, 25 °C

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

© 2026 LANDUSIL

Typical properties

Boiling point, 3.5 mmHg	approx. 102 °C
Dynamic viscosity, 20 °C	approx. 2.5 mPa·s
Behavior in water	Hydrolyzes and releases methanol

For guidance only; not part of the specification.

Applications

NCO-terminated prepolymers
Controlled silane introduction into suitable prepolymers; assess equivalents, residual NCO and retained methoxy functionality.

Coatings
Interface ingredient for selected resin systems; qualify cure, viscosity drift, color and adhesion after conditioning.

Foundry binders
Screen in selected phenolic, furan and melamine systems with the actual sand and catalyst balance.

Adhesives, sealants and primers
Separate primer or additive route for compatible binders and prepared glass, mineral or metal oxide surfaces.

Mineral-filled polymers
Particle treatment or compounding route with suitable reactive or compatibilized matrices; assess dispersion and process behavior.

Glass-fiber and fabric treatments
Sizing or finishing component matched to the matrix, treatment bath, deposition and drying process.

Guidelines for use

Prepolymer modification	Use measured NCO content to set amine/NCO balance and addition conditions. Follow residual NCO, free silane, viscosity and molecular distribution; an infrared endpoint alone does not establish zero free monomer.
Primer or filler treatment	Prepare a compatible dilute treatment. Establish surface preparation, water balance, concentration, drying and the interval before assembly or compounding. Qualify treatment-bath stability.
Direct formulation addition	Choose the addition side using the binder and catalyst chemistry. Compare fresh and stored viscosity, working time, cure and conditioned adhesion against an untreated control.

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

Handling and safety

- Avoid skin and eye contact; exposure can cause irritation, burns or serious eye damage. Wear suitable gloves, protective clothing and eye/face protection.
- Provide ventilation and avoid breathing vapor or mist. Hydrolysis releases toxic methanol; 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.

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.