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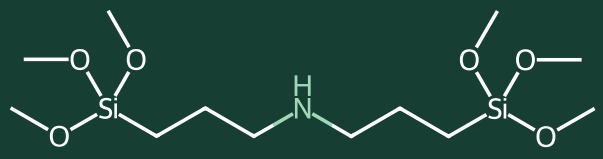
Technical data sheet
TDS-LEGRA-1071-L-EN
Revision 1.0, November 2026

LANDUSIL LEGRA

1071-L

Bis[3-(trimethoxysilyl)propyl]amine

Secondary amino bis-silane for polymer modification and mineral interfaces



Chemical identity

Chemical name
Bis[3-(trimethoxysilyl)propyl]amine

CAS number
82985-35-1

EC number
280-084-5

Structure
$[(CH_3O)_3Si(CH_2)_3]_2NH$

Molecular formula
$C_{12}H_{31}NO_6Si_2$

Molecular weight
341.55 g/mol

Hydrolysis by-product
Methanol

Product description

LANDUSIL LEGRA 1071-L is bis[3-(trimethoxysilyl)propyl]amine. It has one secondary amine with one initial N–H bond between two propyltrimethoxysilyl groups. Each silicon center bears three methoxy groups.

The secondary amine can react with a suitable NCO group to form a urea linkage. Methoxy hydrolysis releases methanol and generates silanols for condensation with other silanols or suitable hydroxylated surfaces. Count the amine reaction separately from silicon condensation; six methoxy groups do not establish cured crosslink density or properties.

Features and benefits

- One secondary amine with one initial N–H bond
- Two silicon centers carry six methoxy groups in total
- Hydrolysis releases methanol and forms silanols
- Reactive component for suitable NCO prepolymer modification
- Screen surface treatment and network growth separately

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. 40**	Platinum-cobalt color comparison
Density, 20 °C	g/cm³	**1.030 – 1.050**	Densimetry, 20 °C

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

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Typical properties

Boiling point, 4 mmHg	approx. 152 °C
Refractive index, n_D^{20}	approx. 1.432
Dynamic viscosity, 20 °C	approx. 6.5 mPa·s
Behavior in water	Hydrolyzes and releases methanol

For guidance only; not part of the specification.

Applications

NCO-prepolymer modification
Introduce hydrolyzable silane groups in a controlled reaction; verify residual reactants, viscosity and moisture-cure behavior.

Coatings
Interface ingredient in selected compatible binders; assess working time, cure and adhesion after water or humidity exposure.

Sand binders, mineral fibers and abrasives
Screen in selected phenolic, furan or melamine resin systems with their actual catalyst balance and cure process.

Adhesives, sealants and primers
Additive or separate primer route for compatible resin systems and prepared glass, ceramic or metal oxide surfaces.

Mineral-filled polymers
Controlled treatment of suitable fillers and pigments; compare dispersion, process behavior and conditioned properties at fixed loading.

Glass-fiber and fabric treatments
Sizing or finishing component matched to the matrix and treatment package; qualify bath stability, drying and fiber handling.

Guidelines for use

Controlled prepolymer reaction	Set addition conditions from measured NCO content and amine assay. Count one initial N–H per molecule. Follow heat release, residual NCO, free silane and molecular distribution before storage and cure studies.
Surface or filler treatment	Prepare a compatible dilute treatment. Establish water balance, concentration, pH, drying and usable bath life. Check for particle bridging or solution growth before bonding or compounding.
Direct formulation addition	Select the addition side using the actual binder and catalyst. Compare viscosity drift, workable time, cure and conditioned adhesion with untreated controls. Evaluate reactive or compatibilized matrices separately.

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 skin irritation and serious eye damage. Wear suitable gloves, protective clothing and eye/face protection.
- Provide ventilation and avoid breathing vapor or mist. Hydrolysis releases toxic methanol and can lower the flash point of the material.
- Keep away from heat and ignition sources. Toxic to aquatic life with long-lasting effects; prevent entry 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 protected from moisture, heat 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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