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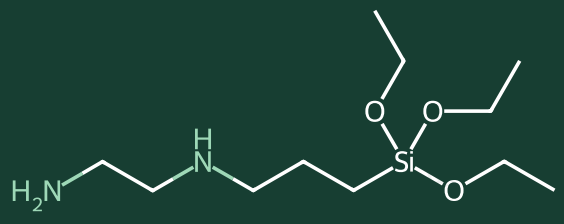
Technical data sheet
TDS-LEGRA-1020-L-EN
Revision 1.0, November 2026

LANDUSIL LEGRA

1020-L

N-(2-Aminoethyl)-3-aminopropyltriethoxysilane

Diamino triethoxy silane for mineral surfaces and compatible organic binders



Chemical identity

Chemical name
N-(2-Aminoethyl)-3-aminopropyltriethoxysilane

CAS number
5089-72-5

EC number
225-806-1

Structure
$H_2NCH_2CH_2NH(CH_2)_3Si(OC_2H_5)_3$

Molecular formula
$C_{11}H_{28}N_2O_3Si$

Molecular weight
264.44 g/mol

Hydrolysis by-product
Ethanol

Product description

LANDUSIL LEGRA 1020-L is N-(2-aminoethyl)-3-aminopropyltriethoxysilane. It contains one primary amine, one secondary amine and three hydrolyzable ethoxy groups in a single molecule.

Water converts the ethoxy groups to silanol-containing species, releasing ethanol. Condensation can connect these species to suitable hydroxylated inorganic surfaces. The two amine groups can participate in epoxy or isocyanate reactions and affect acid-catalyzed binders. Resin compatibility, water balance and addition sequence therefore influence both surface treatment and cure behavior.

Features and benefits

- Primary and secondary amines provide reactive organic sites
- Three ethoxy groups provide silanol-forming sites
- Hydrolysis releases ethanol
- Use in primers, filler treatments and compatible binders
- Include amino functionality in reactive-equivalent calculations

Specification

Property	Unit	Value	Test method
Appearance		**Colorless to light yellow, clear liquid**	Visual
Purity (GC)	%	**min. 97.0**	Gas chromatography
Density, 20 °C	g/cm³	**0.960 – 0.980**	Density measurement, 20 °C
Refractive index, n_D^{25}	–	**1.4250 – 1.4450**	Refractometry, 25 °C

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

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Typical properties

Boiling point, 15 mmHg	approx. 156 °C
Flash point, closed cup	approx. 123 °C
Behavior in water	Hydrolyzes and releases ethanol

For guidance only; not part of the specification.

Applications

Glass-fiber sizing and fabric treatment
Coupling component for sizing and finishing packages matched to the resin matrix, film former and fiber process.

Fillers and pigments
Treatment of silica, quartz and other suitable mineral surfaces before compounding or during controlled blending.

Epoxy and polysulfide adhesives
Adhesion-promoting ingredient in compatible systems; assess cure kinetics, package stability and conditioned adhesion.

Mineral and glass wool binders
Additive for evaluation at the inorganic fiber–binder interface; assess binder distribution and cure behavior.

Glass and metal primers
Surface treatment before bonding or coating; establish cleaning, drying and overcoating conditions.

Phenolic-bonded abrasives
Coupling component for selected abrasive and filler surfaces in phenolic binders.

Guidelines for use

Filler pretreatment	Screen 0.5 – 2.0 % by weight on filler as a starting range. Apply uniformly to an agitated, suitable filler and establish moisture and drying conditions before compounding.
Formulation addition	Introduce into a compatible binder component during mixing. Account for both amine groups in reactive systems and check viscosity, working time and storage stability.
Primer application	Apply from a compatible aqueous or organic treatment to a clean surface. Establish concentration, bath life and drying conditions experimentally before bonding or coating.

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

Handling and safety

- Skin contact may cause irritation, burns or allergic reactions. Protect against serious eye damage with suitable gloves, protective clothing and eye/face protection.
- Hydrolysis releases ethanol. Provide ventilation and control moisture and water addition.
- Keep away from heat and ignition sources. Avoid breathing vapor or mist.
- Check compatibility with acids, ketone or ester solvents and reactive resins before mixing.
- Read the Safety Data Sheet before use.

Storage and shelf life

Store in the original, tightly closed containers in a cool, dry, well-ventilated place, protected from moisture, direct light and ignition sources. Shelf life is 12 months in unopened containers under these conditions. Reseal promptly after dispensing.

Packaging

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

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