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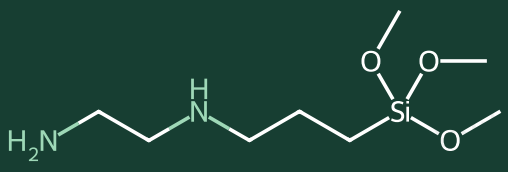
Technical data sheet
TDS-LEGRA-1021-L-EN
Revision 1.0, November 2026

LANDUSIL LEGRA

1021-L

N-(2-Aminoethyl)-3-aminopropyltrimethoxysilane

Diamino methoxy silane for mineral treatment and reactive formulations



Chemical identity

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

CAS number
1760-24-3

EC number
217-164-6

Structure
$H_2NCH_2CH_2NH(CH_2)_3Si(OCH_3)_3$

Molecular formula
$C_8H_{22}N_2O_3Si$

Molecular weight
222.36 g/mol

Hydrolysis by-product
Methanol

Product description

LANDUSIL LEGRA 1021-L is N-(2-aminoethyl)-3-aminopropyltrimethoxysilane. It combines a primary amine, a secondary amine and three hydrolyzable methoxy groups in one small molecule.

Hydrolysis releases methanol and forms silanol-containing species that can condense at suitable hydroxylated surfaces. The amines can react with epoxy or isocyanate groups and alter binder cure. Surface pretreatment and direct formulation addition therefore require separate trials. Water balance, concentration, elapsed time and resin compatibility determine the treatment reaching the interface.

Features and benefits

- Primary and secondary amines provide two reactive environments
- Three methoxy groups provide silanol-forming sites
- Hydrolysis releases methanol
- Use for mineral treatment, primers and compatible formulations
- Account for amino reactions when selecting the addition stage

Specification

Property	Unit	Value	Test method
Appearance		**Colorless to light yellow, clear liquid**	Visual
Purity (GC)	%	**min. 97.0**	Gas chromatography
Color	Pt-Co	**max. 30**	Platinum-cobalt color comparison
Density, 20 °C	g/cm³	**1.010 – 1.030**	Density measurement, 20 °C
Refractive index, n_D^{25}	–	**1.4380 – 1.4480**	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. 146 °C
Flash point, closed cup	approx. 85 °C
Dynamic viscosity, 20 °C	approx. 6 mPa·s
Behavior in water	Hydrolyzes and releases methanol

For guidance only; not part of the specification.

Applications

Glass fibers and fabrics

Coupling component in compatible sizing and finishing packages; assess bath behavior, drying and the final composite matrix.

Clay-filled elastomers

Coupling candidate for selected clay-filled natural and nitrile rubbers; assess the clay surface and complete cure package.

Adhesives, sealants and coatings

Interface modifier in compatible epoxy or polyurethane systems; evaluate storage, working time and conditioned adhesion.

Mineral-filled polymers

Treatment of suitable fillers and pigments for selected compounds, including mineral-filled nylon 6, nylon 6/6 and PBT.

Glass and metal primers

Separate surface treatment before bonding or coating; assess each substrate preparation and overcoating interval.

Foundry and abrasive binders

Treatment for selected mineral–resin interfaces; monitor amine effects on binder cure and article strength.

Guidelines for use

Primer or sizing treatment	Prepare a dilute treatment in a compatible alcohol or an aqueous sizing formulation. Establish concentration, addition sequence and usable bath time for the actual process.
Filler pretreatment	Apply neat or from a compatible solution with uniform mixing. Control filler moisture and drying, then limit atmospheric exposure before compounding.
Direct formulation addition	Introduce into a compatible component during mixing. Include both amine groups in the assessment of reactive equivalents; verify working time, cure and storage stability.

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

Handling and safety

- Can irritate skin, cause allergic skin reactions and seriously damage eyes. Wear suitable gloves, protective clothing and eye/face protection.
- Avoid breathing vapor or mist; repeated inhalation exposure may damage organs. Provide suitable ventilation.
- Hydrolysis releases toxic methanol. Control water addition, moisture exposure and residual volatiles.
- Keep away from heat and ignition sources. Check ketone or ester solvent compatibility with the amines.
- Read the Safety Data Sheet before use.

Storage and shelf life

Store in original, tightly closed containers in a cool, dry, ventilated place away from light, heat and moisture. Shelf life is 12 months in unopened containers under these conditions. Reseal promptly and minimize atmospheric exposure after opening.

Packaging

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

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