LANDUSIL LEGRA

1041-L

N-(2-Aminoethyl)-3-aminopropylmethyldimethoxysilane

Diamino dimethoxy silane for reactive interfaces and intermediates



Chemical identity

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

CAS number
3069-29-2

EC number
221-336-6

Structure
$H_2NCH_2CH_2NH(CH_2)_3Si(CH_3)(OCH_3)_2$

Molecular formula
$C_8H_{22}N_2O_2Si$

Molecular weight
206.36 g/mol

Hydrolysis by-product
Methanol

Product description

LANDUSIL LEGRA 1041-L is N-(2-aminoethyl)-3-aminopropylmethyldimethoxysilane. It contains a primary amine, a secondary amine, two methoxy groups and a silicon-bound methyl group.

The methoxy groups hydrolyze to silanols, releasing methanol. Condensation can connect these species to suitable hydroxylated surfaces or siloxane partners. The amines provide separate reactions with compatible organic binders, including epoxy and isocyanate groups. Amine structure and silicon connectivity matter when setting reactive equivalents, addition sequence and the endpoint of a synthesis or surface treatment.

Features and benefits

- Primary and secondary amines provide two reactive environments
- Two methoxy groups and one methyl group on silicon
- Hydrolysis releases methanol
- Building block for amino silicones and controlled NCO reactions
- Use in compatible binders, primers and mineral treatments

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	**0.960 – 0.980**	Density measurement, 20 °C
Refractive index, n_D^{25}	–	**1.4300 – 1.4500**	Refractometry, 25 °C

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

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Typical properties

Boiling point, 25 mmHg	approx. 139 °C
Flash point, closed cup	approx. 90 °C
Kinematic viscosity, 25 °C	approx. 4.6 mm²/s
Behavior in water	Hydrolyzes and releases methanol

For guidance only; not part of the specification.

Applications

Reactive adhesives
Ingredient for selected epoxy and polyurethane systems; account for both amines and assess working time, cure and storage viscosity.

Substrate primers
Separate treatments for prepared glass, ceramics and suitable metal oxide surfaces before bonding or coating.

Amino silicones and reactive intermediates
Building block for controlled siloxane synthesis or reaction with selected NCO-terminated prepolymers.

Hybrid and condensation sealants
Adhesion-promoting ingredient evaluated with the actual binder, catalyst, filler and moisture-control package.

Fillers, coatings and molding compounds
Interface treatment for suitable fillers and pigments in compatible epoxy, phenolic and coating formulations.

Glass-fiber treatment
Coupling component for compatible sizing and fabric finishes; qualify the complete treatment and final resin matrix.

Guidelines for use

Sealant addition	Screen 0.5 – 1.0 % by weight of the sealant in compatible hybrid or condensation silicone systems. Check fresh and stored extrusion, skin formation, cure and substrate adhesion.
Surface treatment	Apply from a compatible dilute treatment to the prepared substrate or suitable filler. Establish concentration, bath life, drying and the delay before further processing.
Reactive synthesis	Set reaction partners, amine/NCO balance and addition sequence before charging. Follow residual NCO, viscosity and molecular distribution; check retained hydrolyzable groups and volatiles.

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

Handling and safety

- Can cause skin burns, allergic skin reactions and serious eye damage. Wear suitable gloves, protective clothing and eye/face protection.
- Hydrolysis releases toxic methanol. Control moisture and water addition, provide ventilation and avoid breathing vapor or mist.
- Keep away from heat, sparks and open flames; alcohol formation can affect fire behavior.
- Check compatibility with acids, ketone solvents, reactive resins and the selected silicone catalyst before mixing.
- 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, direct sunlight and ignition sources. Shelf life is 12 months in unopened containers under these conditions. Use promptly after opening.

Packaging

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

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