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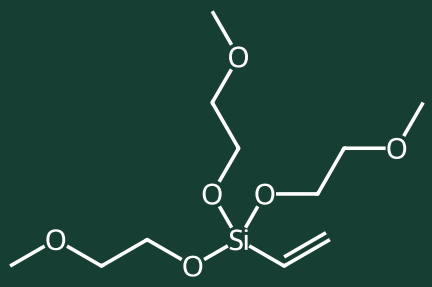
Technical data sheet
TDS-LEGRA-3012-L-EN
Revision 1.0, November 2026

LANDUSIL LEGRA

3012-L

Vinyltris(2-methoxyethoxy)silane

Vinyl-functional coupling agent with hydrolyzable 2-methoxyethoxy groups



Chemical identity

Chemical name
Vinyltris(2-methoxyethoxy)silane

CAS number
1067-53-4

EC number
213-934-0

Molecular formula
$C_{11}H_{24}O_6Si$

Molecular weight
280.39 g/mol

Hydrolysis by-product
2-Methoxyethanol

Product description

LANDUSIL LEGRA 3012-L is vinyltris(2-methoxyethoxy)silane. It carries one silicon-bound vinyl group and three hydrolyzable 2-methoxyethoxy groups. Development routes include mineral-filled elastomers, reactive polyester interfaces and selected polymer dispersions.

A suitable radical reaction can incorporate the vinyl group into a compatible organic system. Hydrolysis of the other groups releases 2-methoxyethanol and forms silanols that can condense with hydroxyl-bearing surfaces or other silanols. Polymer incorporation, surface coupling and condensation require separate process control and verification.

Features and benefits

- One silicon-bound vinyl group for selected radical reactions
- Three hydrolyzable 2-methoxyethoxy groups
- Releases 2-methoxyethanol during hydrolysis
- Coupling component for compatible mineral-filled compounds
- Comonomer option for selected polymer dispersions

Specification

Property	Unit	Value	Test method
Appearance		**Colorless, clear liquid**	Visual
Purity (GC)	%	**min. 97.0**	Gas chromatography
Color	Pt-Co	**max. 30**	Color comparison
Refractive index, n_D^{25}	–	**1.4210 – 1.4310**	Refractometry

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

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Typical properties

Boiling point, 5.5 mmHg	approx. 136.2 °C
Density, 25 °C	approx. 1.034 g/cm³
Flash point, method not stated	approx. 92 °C
Dynamic viscosity, 20 °C	approx. 2.8 mPa·s

For guidance only; not part of the specification.

Applications

Peroxide-cured EPM and EPDM

Coupling development in mineral-filled elastomers. Evaluate filler treatment, scorch, cure and conditioned properties in the complete compound.

Unsaturated polyester composites

Reactive interface component for glass or mineral reinforcement where the resin cure can use the vinyl group. Verify wetting and conversion.

Polyethylene grafting development

Precursor for a designed grafting reaction followed by moisture cure. Establish residual silane, premature gel and cure through the actual section.

Kaolin-filled polyethylene compounds

Interface treatment for suitable mineral-filled formulations. Assess dispersion, processability and retained properties after moisture exposure.

Styrene-acrylic dispersions

Comonomer for designed polymerization routes. Measure incorporation, residual monomer, particle stability and subsequent film behavior.

Guidelines for use

Mineral-filled elastomers	For initial trials, screen 0.5 – 5 parts per 100 parts of active white filler. This is a filler-based dosage. Check filler moisture, treatment sequence, peroxide package and alcohol removal.
Reactive polymer incorporation	Select an initiator and reaction sequence compatible with the polymer. Measure incorporation and residual monomer before optimizing later hydrolysis or moisture cure.
Dispersion development	Introduce through a designed copolymerization process. Assess particle and bath stability, hydrolysis and 2-methoxyethanol exposure throughout manufacture and drying.

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

Handling and safety

- May damage fertility and the unborn child. Harmful in contact with skin; prevent exposure and use suitable gloves, clothing and eye protection.
- Hydrolysis releases 2-methoxyethanol, which also presents reproductive hazards. Control vapor, skin exposure and emissions during reaction, mixing and drying.
- Keep dry and away from heat and ignition sources. Use ventilation and prevent uncontrolled acid, base or initiator contamination.
- Use is subject to regional regulations; check the current regulatory status before use.
- Read the Safety Data Sheet before use.

Storage and shelf life

Store in original, tightly closed containers in a cool, dry and well-ventilated place, away from moisture, sunlight, heat and ignition sources. Shelf life is 12 months in unopened containers. Use dry transfer equipment, promptly reseal after sampling, and check material condition before use.

Packaging

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

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