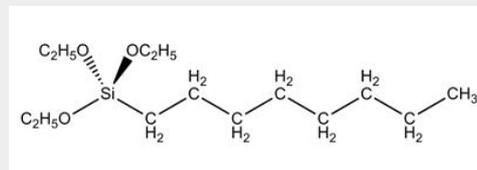


BELSIL[®] ES 3007

Silanes

BELSIL[®] ES 3007 is a clear, colorless liquid with a characteristic odor which can be used as surface modifier to generate hydrophobicity on inorganic fillers and pigments, e.g. titanium dioxide.

CAS No.: 2943-75-1



INCI Triethoxycaprylsilane | Empirical formula C₁₄H₃₂O₃Si |
Molecular weight 276,5 g/mol

Properties

BELSIL[®] ES 3007 is widely used in surface treatment for pigments in cosmetic vehicles and composites. May be formulated to stable water emulsions.

Use of BELSIL[®] ES 3007 results in compatibility improvements between pigments or inorganic fillers and organic polymers or solvents, allowing easy pigment (e.g. iron oxides or titanium dioxide) or mineral filler (e.g. ATH, MDH) dispersion.

Special features

BELSIL[®] ES 3007 is practically insoluble in water. The silane hydrolyzes slowly in the presence of moisture (ethanol is released) to form reactive silanols, which can then react with themselves to produce siloxanes.

Technical data

General Characteristics

Property	Condition	Value	Method
Appearance	-	colorless, clear	ASTM D 412
Boiling point	1013 hPa	265 °C	-
Density	20 °C	0.88 g/cm ³	-
Flash point	-	54 °C	ISO 13736
Molecular weight (Mw)	-	approx. 276.0 g/mol	-
Silane content	-	approx. 99.0 %	-
Viscosity, dynamic	20 °C	2 mPa·s	-

These figures are only intended as a guide and should not be used in preparing specifications.

All the information provided is in accordance with the present state of our knowledge. Nonetheless, we disclaim any warranty or liability whatsoever and reserve the right, at any time, to effect technical alterations. The information provided, as well as the product's fitness for an intended application, should be checked by the buyer in preliminary trials. Contractual terms and conditions always take precedence. This disclaimer of warranty and liability also applies particularly in foreign countries with respect to third parties' rights.

Application details

BELSIL® ES 3007 is used to render a wide range of materials water repellent (e.g. fillers, coating of pigments etc.). BELSIL® ES 3007 is also used in the production of silane-crosslinking formulations.

Processing

General processing information:

BELSIL® ES 3007 is highly miscible with standard solvents such as alcohols and acetone.

BELSIL® ES 3007 is practically insoluble in neutral water and reacts only slowly to form silanols. Addition of a hydrolytic catalyst (inorganic/organic acids, ammonia or amines) accelerates the hydrolysis of BELSIL® ES 3007.

Using standard coating techniques, undiluted BELSIL® ES 3007 can aid in the dispersion of inorganic pigments and fillers in coatings and sealants. This can lead to lower viscosity in the formulated product and can improve the hiding power of a coating.

BELSIL® ES 3007 as a filler modifier: BELSIL® ES 3007 may be used pure or in solution to treat fillers, using suitable mixing equipment. It may be necessary to first pre-treat the substrate with water and/or a catalyst.

BELSIL® ES 3007 can couple inorganic pigments and fillers to organic resins. Coupling typically improves the moisture and chemical resistance of the coating or adhesive. Good wetting agent for colorants or pigments.

Packaging and storage

Storage

The 'Best use before end' date of each batch is shown on the product label.

Storage beyond the date specified on the label does not necessarily mean that the product is no longer usable. In this case however, the properties required for the intended use must be checked for quality assurance reasons.

Safety notes

Comprehensive instructions are given in the corresponding Material Safety Data Sheets. They are available on request from WACKER subsidiaries or may be printed via WACKER web site <http://www.wacker.com>.

QR Code BELSIL® ES 3007



For technical, quality or product safety questions, please contact:

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The data presented in this medium are in accordance with the present state of our knowledge but do not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this medium should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies' raw materials are also being used. The information provided by us does not absolve the user from the obligation of investigating the possibility of infringement of third parties' rights and, if necessary, clarifying the position. Recommendations for use do not constitute a warranty, either express or implied, of the fitness or suitability of the product for a particular purpose.