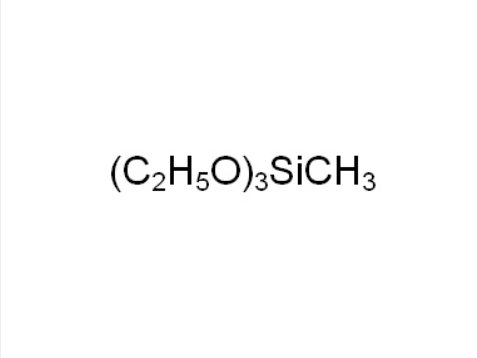
WACKER® SILANE M1-TRIETHOXY

Organofunctional Silanes

WACKER® SILANE M1-TRIETHOXY is a clear, colorless liquid with an odor characteristic of alcohols.



Properties

The use of WACKER® SILANE M1-TRIETHOXY to render fillers water repellent considerably improves their dispersibility and reduces their sedimentation tendency. Mineral-filled plastics can thus be processed more easily. Additionally, resistance to moisture and chemicals is much increased. WACKER® SILANE M1-TRIETHOXY can be used as a constituent of silica gels, silicone resins and silicone rubber. In such compounds, the degree of curing and hence mechanical properties, such as elongation at break, modulus of elasticity and a coating's flexibility, can be controlled precisely by varying the amount of WACKER® SILANE M1-TRIETHOXY used.
WACKER® SILANE M1-TRIETHOXY is an alkylalkoxysilane. The silane hydrolyzes slowly in the presence of moisture (ethanol is released) to form reactive silanols. These react further to produce oligosiloxanes and then polysiloxanes.

Technical data

General Characteristics

Property	Condition	Value	Method
Acidity (direct titration)	-	max. 20 mg/kg	-
Boiling point	1013 hPa	143 °C	-
Density	25 °C	0.89 g/cm^3	-
Flash point	-	33 °C	DIN 51755
Ignition temperature	-	220 °C	DIN 51794
Purity	-	min. 97 %	-

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

Applications

- Filler Treatment
- Heat-Resistant Coatings
- Industrial Coatings

Application details

General processing information:

WACKER® SILANE M1-TRIETHOXY is highly miscible with standard organic solvents, such as alcohols, hydrocarbons and acetone.
WACKER® SILANE M1-TRIETHOXY is practically insoluble in neutral water and reacts only slowly to form silanols and higher condensation products. Addition of a hydrolytic catalyst (inorganic/organic acids, ammonia or amines) accelerates the hydrolysis of WACKER® SILANE M1-TRIETHOXY substantially. The relative and absolute rates of hydrolysis and condensation to form siloxanes will depend on various factors, such as pH (catalyst), concentration, temperature and solvent.

WACKER® SILANE M1-TRIETHOXY as a filler modifier:

WACKER® SILANE M1-TRIETHOXY 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.

WACKER® SILANE M1-TRIETHOXY as a constituent of sol-gel materials and silicones:

As a constituent of sol-gel materials, WACKER® SILANE M1-TRIETHOXY - on its own or together with other siliceous building blocks, such as silicates (SILICATE TES 28) or organofunctional silanes from the WACKER GENIOSIL ® range and perhaps stabilizing substances in aqueous or aqueous/organic solvent mixtures -undergoes a sol-gel process. Various properties (e.g. refractive index, flexibility, resistance to chemicals or scratches) of coatings produced in this way can be controlled by precisely adjusting parameters such as temperature, pH and concentration.

WACKER® SILANE M1-TRIETHOXY is used mainly to render a wide range of surfaces and materials water repellent (e.g. mineral fillers, pigments, glass, cardboard). WACKER® SILANE M1-TRIETHOXY is also used in the production of silicone resins and condensation-curing silicone rubber. In a further application, aqueous sol-gel coating systems are used to produce organic-inorganic hybrids.

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. 18 Leerzeilen

QR Code WACKER® SILANE M1-TRIETHOXY

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

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