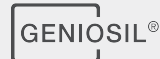


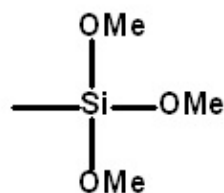
GENIOSIL[®] MTM



Silanes

GENIOSIL[®] MTM is a clear colorless liquid with a distinctive odour.

CAS No. 1185-55-3 | Empirical formula C₄H₁₂O₃Si | Molecular weight 136.22



Properties

GENIOSIL[®] MTM is an alkylalkoxysilane. The silane hydrolyzes slowly in the presence of moisture (methanol is released) to form reactive silanols. These react further to produce oligosiloxanes, and then polysiloxanes.

The use of GENIOSIL[®] MTM 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. GENIOSIL[®] MTM 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 GENIOSIL[®] MTM used.

Technical data

General Characteristics

Property	Condition	Value	Method
APHA	-	≤ 30	-
Appearance	-	clear, colorless	-
Hydrolyzable chloride	-	≤ 30 ppm	-
Purity	-	≥ 97.0 %	GC

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.

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

Applications

- Filler Treatment
- Heat-Resistant Coatings

Application details

GENIOSIL® MTM is used mainly to render a wide range of surfaces and materials water repellent (e.g. mineral fillers, pigments, glass, cardboard). GENIOSIL® MTM 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.

Processing

General processing information: GENIOSIL® MTM is highly miscible with standard organic solvents, such as alcohols, hydrocarbons and acetone. GENIOSIL® MTM 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 GENIOSIL® MTM substantially. The relative and absolute rates of hydrolysis and condensation to form siloxanes will depend on various factors, such as pH value (catalyst), concentration, temperature and solvent.

GENIOSIL® MTM as a filler modifier:

GENIOSIL® MTM may be used as is 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.

GENIOSIL® MTM as a constituent of sol-gel materials and silicones:

As a constituent of sol-gel materials, GENIOSIL® MTM - on its own or together with other siliceous building blocks, such as silicates (GENIOSIL® TE 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.

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.

QR Code GENIOSIL® MTM



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

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productinformation@wacker.com, www.wacker.com

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.