

# WACKER<sup>®</sup> SILICATE TES 28

## Ethyl Silicates

WACKER<sup>®</sup> SILICATE TES 28 is monomeric ethyl silicate, also known as tetraethoxysilane or tetraethyl orthosilicate. It is a colorless low-viscous liquid with an SiO<sub>2</sub>-content of app. 28 wt.%.

## Properties

WACKER<sup>®</sup> SILICATE TES 28 offers:

- storage-stable, low viscous liquid
- reactive and volatile silane (boiling point app. 168°C)
- tetrafunctional monomer
- liquid source of silica / silicone dioxide, either by hydrolysis or thermal deposition

# Technical data

## General Characteristics

Property	Condition	Value	Method
Acidity	-	≤ 5 ppm	-
Appearance	-	colorless, clear	-
Color	-	≤ 5.0 APHA	-
Density	25 °C	0.93 g/cm <sup>3</sup>	DIN 51757
Ethanol	-	≤ 0.3 wt. %	-
Hydrolysable Chloride	-	≤ 5 mg/kg	-
Molecular weight (Mw)	-	208 g/mol	-
Purity	-	≥ 99 wt. %	-
SiO <sub>2</sub> -content	-	approx. 28.5 wt. %	-

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.

Store in a dry and cool place.

Protect against moisture.

## Applications

- Anti-Corrosive Coatings
- Industrial Coatings
- Marine & Protective Coatings

## Application details

### General

WACKER® SILICATE TES 28 is being used for the precipitation of silica (polymeric SiO<sub>2</sub> structures) by complete hydrolysis or thermal decomposition. Ethanol is generated as by-product.

The polymeric SiO<sub>2</sub> structures firmly bind inorganic fillers and pigments and adhere well to different inorganic substrates like glass, ceramics or metal. Chemical and mechanical properties of the substrates can be improved by the thin SiO<sub>2</sub> film, which is also highly heat-resistant.

### Typical applications

- binder for refractory fillers (production of ceramic shells and cores)
- precision casting
- silica coating on pigments, fibers and other surfaces

- source of finely divided silica
- crosslinking agent, e. g. for silicone elastomers
- water scavenger in sealants
- sol-gel processes

## Packaging and storage

### Packaging

- 25 kg steel can
- 190 kg steel drum
- 850 kg IBC

### Storage

WACKER® SILICATE TES 28 must be stored in the tightly closed original container under exclusion of moisture.

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 WACKER® SILICATE TES 28



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

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