

# Dynasytan® SILBOND® HT-30

## Ethyl polysilicate hybrid binder

### Technical Data

Properties and test methods	Unit	Value
Physical Form	-	Opaque liquid
Density (20 °C)	g/cm <sup>3</sup>	0.980 - 0.992
Viscosity (20 °C)	mPa·s / cSt	4.0 - 7.0
Flash Point	°C/ °F	14 / 58
Silica Content (as SiO <sub>2</sub> )	% by wt	29.5 - 31.0

Dynasytan® SILBOND® HT-30 is a milky-white, low-viscosity pre-hydrolyzed ethyl polysilicate hybrid binder that contains a mixture of silica derived from TEOS and other components. The silica content ranges from 29.5% to 31.0% (as SiO<sub>2</sub>). This material is formulated for use in precision investment casting applications. Advantages include high green-strength and excellent performance in high-temperature casting applications. The improved green-strength is a direct result of the higher SiO<sub>2</sub> content.

### Safety and handling

Before considering the use of Dynasytan® SILBOND® products please read its Safety Data Sheet (SDS) thoroughly for safety and toxicological data as well as for information on proper transportation, storage and use. The Safety Data Sheet is available after registration on our website [www.dynasytan.com](http://www.dynasytan.com) or upon request from your local representative, customer service or from Evonik Resource Efficiency GmbH, Product Safety Department, E-MAIL [sds-hu@evonik.com](mailto:sds-hu@evonik.com).

### Packaging, storage and shelf life

Dynasytan® SILBOND® HT-30 could be available in pails, drums, totes, and tanker quantities.

In the unopened container Dynasytan® SILBOND® HT-30 has a shelf life of min. 12 months from date of manufacture.

Please ask us for further details.

## Properties and applications

Dynasylan® SILBOND® HT-30 can be used, as delivered, to make ceramic molds for the Precision Investment Casting industry.

The degree of hydrolysis and acidity have been optimized for the required reactivity and sufficient storage stability.

The hydrolysis and condensation has been started during the production of the binder. Through a shift in the pH this process is accelerated. This shift is achieved by addition of fillers, pigments, additive, or through the evaporation of solvent or exposure to atmospheric moisture. The resulting silicic acid gel cures rapidly at ambient temperatures in air. The process of curing can be accelerated through the addition of alkali catalysts.

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