

Product Information

Dynasytan® SILBOND® H-4

Ethyl polysilicates binder

CAS NUMBER

confidential

PRODUCT DESCRIPTION

Dynasytan® SILBOND® H-4 is a clear, low-viscosity pre-hydrolyzed ethyl polysilicate binder that has been designed for the precision investment casting industry. The silica content ranges from 17.5% to 19.0% (as SiO₂).

Typical Properties

Property	Unit	Value
Appearance		Clear Liquid
Boiling Point, min.	°C	122
Density (20 °C)	g/cm ³	0.900-0.920
Flash Point, min.	°C	13
Viscosity (20 °C)	mPa·s	5.0

The data represents typical values (no product specification)

TYPICAL APPLICATIONS

It is well suited for use with alkaline refractories, and in ceramic shell and dip casting applications.

Product Composition

Product Composition	Unit	Value
Silicon Dioxide (SiO ₂) Content	wt%	17.5-19.0

The data represents typical values (no product specification)

BENEFITS & ADVANTAGES

Dynasytan® SILBOND® H-4 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.

HANDLING & PROCESSING

Before considering the use of Dynasytan® 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 on our website <https://silanes.evonik.com/en> or upon request from your local representative, customer service or from Evonik Operations GmbH, Product Safety Department, E-MAIL sds-hu@evonik.com.

PACKAGING

Dynasytan® SILBOND® H-4 could be available in pails, drums, totes and tanker quantities.

Please ask for further details.

SHELF LIFE

In unopened container Dynasytan® SILBOND® H-4 has a shelf life of min. 6 months from date of manufacture.

Registration Listings

Registry	Status
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Australia (AIC)	Yes
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Canada (DSL)	Yes
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China (IECSC)	Yes
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EU (REACH)	Yes
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Japan (ENCS)	Yes
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Registration Listings

Registry	Status
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South Korea (KECL)	Yes
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New Zealand (NZIoC)	Yes
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Taiwan (TCSI)	Yes
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United States of America (TSCA)	Yes
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Disclaimer

This information and all further technical advice are based on our present knowledge and experience. However, it implies no liability or other legal responsibility on our part, including with regard to existing third-party intellectual property rights, especially patent rights. In particular, no warranty, whether express or implied, or guarantee of product properties in the legal sense is intended or implied. We reserve the right to make any changes according to technological progress or further developments. The customer is not released from the obligation to conduct careful inspection and testing of incoming goods. Performance of the product described herein should be verified by testing, which should be carried out only by qualified experts in the sole responsibility of a customer. Reference to trade names used by other companies is neither a recommendation, nor does it imply that similar products could not be used.

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