

Product Information

Dynasytan® 9896

Oligomeric alkylsilane condensate

CAS NUMBER

confidential

PRODUCT DESCRIPTION

Dynasytan® 9896 is an oligomeric short-chain alkylfunctional silane.

Dynasytan® 9896 is a clear, colourless to slightly yellow liquid and soluble in common organic solvents (e.g. petroleum ether, toluene, alcohol). Because of its low volatility and viscosity Dynasytan® 9896 is an easy-to-handle additive.

During the hydrolysis reaction between water and Dynasytan® 9896 a certain amount of VOC (volatile organic compound) is released as ethanol. From an environmental standpoint it should be noted that the amount of released hydrolysis ethanol (VOC) is significantly reduced compared to monomeric alkyl silanes and is below 100 g/l.

The high boiling point of Dynasytan® 9896, together with its high flash point, gives outstanding advantages with respect to safety and handling during processing.

Typical Properties

Property	Unit	Value
Chemical Name		oligomeric alkylalkoxysiloxane
Density DIN 51757 (@20 °C)	g/cm ³	1.04-1.04
Flash Point, min. DIN EN ISO 2719	°C	63
pH Value 500 g/l water, 20 °C		3-4
Viscosity (20 °C) DIN 53015	mPa·s	60-60

The data represents typical values (no product specification)

TYPICAL APPLICATIONS

Dynasytan® 9896 silane can be used as a surface modifier to generate hydrophobicity (e.g. on inorganic pigments, mineral fillers). The short-chain alkyl functionality results in unique compound properties when Dynasytan® 9896 treated minerals or pigments are incorporated into polymers, e.g. polyethylene or polypropylene. Loading levels of 0.5 to 1.5 weight-% Dynasytan® 9896 based on the weight of filler or pigment are typically recommended. Dynasytan® 9896 is excellent as a dispersion and hydrophobation agent in mineral filled compounds. Dynasytan® 9896 forms covalent bonds to the inorganic and will not deplete in the final compound as it will happen to silicone oils used as surface modifiers. So Dynasytan® 9896 enables the printability of mineral filled plastics. In the presence of moisture, a low pH is created, the ethoxy groups of Dynasytan® 9896 hydrolyse to produce ethanol and reactive silanol groups. These silanol groups react with the filler via silicon-oxygen bridges. Dynasytan® 9896 can be used in many other applications such as filler and pigment coatings, dispersions etc. Typical property improvements obtained by using Dynasytan® 9896 in filled polymers are:

- improved filler dispersion
- good processability
- significantly reduced water-uptake

BENEFITS & ADVANTAGES

Because of its unique structure, Dynasytan® 9896 exhibits superior hydrophobicity on substrates and forms chemical bonds to substrates. Use of Dynasytan® 9896 silane results in:

- Particularly in non-polar media (e.g. polyolefins etc.). Dynasytan® 9896 treated inorganic substrates (e.g. titanium dioxide, ATH, or MDH) dispersion show excellent compatibility.
- Dynasytan® 9896 as all silanes forms covalent bonds and will not deplete in the final compound.
- Higher filler loadings are possible. Better compatibility results in lower viscosity compared to unmodified compounds.

HANDLING & PROCESSING

Before considering the use of Dynasylan® 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

Dynasylan® 9896 is supplied in 25 kg pails, 200 kg polyethylene inlined steel drums and 950 kg non-returnable IBC totes (net weight).

STORAGE

The containers must remain tightly sealed and stored in a cool, well-ventilated place protected against moisture.

SHELF LIFE

In the unopened container Dynasylan® 9896 has a shelf life of min. 12 months from delivery.

Registration Listings

Registry	Status
Australia (AIIC)	No
Canada (DSL)	Information on Request
China (IECSC)	Information on Request
EU (REACH)	Exempted
European Union (EINECS/ELINCS)	Yes
Japan (ENCS)	Yes
South Korea (KECL)	Yes
Philippines (PICCS)	Yes
United States of America (TSCA)	Yes

Disclaimer

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