

Product Information

Dynasylan® HYDROSIL 2909

aqueous oligomeric aminoalkyl- functional silane hydrolysate for generation of highly hydrophobic surfaces

CAS NUMBER

confidential

PRODUCT DESCRIPTION

Dynasylan® HYDROSIL 2909 is an aqueous oligomeric aminoalkyl-functional silane hydrolysate. It is almost colorless aqueous solution with an amine-like odour, miscible with alcohols or water.

Dynasylan® HYDROSIL 2909 can be diluted with water in all proportions (stirring for at least 1 h at RT). During dilution, the oligomeric structure changes and the number of SiOH groups increases. The hydrolysates are long-term stable.

Typical Properties

Property	Unit	Value
Color ISO 6271; Unit: mg Pt-Co/l		< = 50
Density (20 °C) DIN 51757	g/cm ³	1.085-1.107
Flash Point, min. DIN EN 22719	°C	95
pH Value (20 °C) DIN 19268		4.2-4.6
Viscosity (20 °C) DIN 53015	mPa·s	≤100

The data represents typical values (no product specification)

TYPICAL APPLICATIONS

Dynasylan® HYDROSIL 2909 is a trifunctional organic compound in which the silanol groups can be bonded to an

inorganic substrate and the organophilic aminoalkyl group can interact with a suitable polymer or resin.

Examples of suitable inorganic substrates are:

- glass, glass fibers, glass beads and glass wool
- mineral wool
- metals
- and various fillers like quartz, wollastonite or ATH.

Examples of suitable polymers or resins are:

- Thermosets like epoxy, phenolic, furanic and melaminic resins
- Thermoplastics like PA, PBT, EVA, PPS, MAPE, MAPP, PVB, acrylates
- Elastomere like silicones

Dynasylan® HYDROSIL 2909 finds application in many industries. Advantages arise in water-based systems.

Examples are:

- as a glass and metal primer
- as a size constituent of glass fiber/glass fabric composites or mineral wool insulating materials
- as an additive to foundry resins and abrasives
- as a pretreatment or an additive to mineral-filled thermoplastic compounds
- as an additive for adhesives and sealants to improve adhesion to the substrate
- as an additive and/or primer for paints and varnishes to improve adhesion to the substrate

Product Composition

Product Composition	Unit	Value
Nitrogen (N₂) Content SAA 1905, average	wt%	2.1
Solids Content DIN 38409-H1-1	wt%	34-39

The data represents typical values (no product specification)

BENEFITS & ADVANTAGES

The particular advantages of Dynasylan® HYDROSIL 2909 compared with the corresponding monomeric amino- or alkyl-functional alkoxysilanes are:

- Alcohol content of $\leq 1\%$ guarantees nonflammability, safe handling and minimal volatile organic constituents emission.
- No hydrolysis chemistry is needed as Dynasylan® HYDROSIL 2909 is a ready-to-use aqueous silane hydrolysate.
- Easily diluted with water to adjust to target concentration.

Important product effects that can be achieved by using Dynasylan® HYDROSIL 2909 are:

- Improved mechanical properties, e.g. flexural strength, tensile strength, impact strength, modulus of elasticity.
- Improved resistance to moisture and corrosion.
- Improved adhesion by excellent surface wetting of inorganic substrates and optimal reaction with organic polymers.

Dynasylan® HYDROSIL 2909 helps as well to improve processing properties such as:

- Nonflammability making almost no particular equipment safety precautions necessary.
- Better filler dispersion leading to increased filler content during compounding.

HANDLING & PROCESSING

Before considering the use of Dynasylan® products please read their actual 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 Opera-

tions GmbH, Product Safety Department, E-MAIL sds-hu@evonik.com.

Please refer to your Evonik representative to discuss exact handling (e.g. dilution, wetting, curing temperature) of Dynasylan® HYDROSIL 2909 with a technical expert to achieve the best possible results.

PACKAGING

Dynasylan® HYDROSIL 2909 is supplied in 25 kg PE cans and 200 kg drums.

STORAGE

It is recommended to store Dynasylan® HYDROSIL 2909 above 4 °C and below 40°C.

Dynasylan® HYDROSIL 2909 has a flash point $> 93^{\circ}\text{C}$ and can be stored and transported accordingly with different local requirements, compared to flammable liquids (Category 2, 3 and 4), as the most established monomeric alkoxysilane materials are.

SHELF LIFE

Dynasylan® HYDROSIL 2909 has a shelf life of minimum 6 months from delivery in an originally sealed can or drum.

Registration Listings

Registry	Status
China (IECSC)	Yes
EU (REACH)	Exempted
Philippines (PICCS)	Yes
Türkiye (KKDIK)	Information on Request
Taiwan (TCSI)	Yes
United States of America (TSCA)	Yes

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.

Evonik Operations GmbH

Silanes
Rodenbacher Chaussee 4
63457 Hanau-Wolfgang
Germany
evonik.click/silanes