

Product Information

Dynasylan® HYDROSIL 2775

aqueous oligomeric amino-functional silane hydrolysate with high amino-group density

PRODUCT DESCRIPTION

Dynasylan® HYDROSIL 2775 is an aqueous oligomeric amino-functional silane hydrolysate. It is a colorless to slightly yellowish aqueous solution with an amine-like odour, miscible with alcohols or water.

Dynasylan® HYDROSIL 2775 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
Appearance		Dynasylan® HYDROSIL 2775 is a clear to yellowish aqueous liquid.
Color ISO 6271; Unit: mg Pt-Co/l		< 250
Density (20 °C) DIN 51757	g/cm ³	1.0-1.2
Flash Point, min. DIN EN 22719	°C	95
pH Value (20 °C) DIN 19268		10-11.4
Viscosity (20 °C) DIN 53015	mPa·s	≤100

The data represents typical values (no product specification)

TYPICAL APPLICATIONS

Dynasylan® HYDROSIL 2775 is a bifunctional organic compound in which the silanol groups can be bonded to an

inorganic substrate and the organophilic aminoalkyl-functional 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 2775 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 MW 216, average, measured as NH ₂	wt%	6.7
Solids Content DIN 38409-H1-1	wt%	28-33

The data represents typical values (no product specification)

BENEFITS & ADVANTAGES

The particular advantages of Dynasylan® HYDROSIL 2775 compared with the corresponding monomeric amino-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 2775 is a ready-to-use aqueous silane hydrolysate.
- Easily diluted with water to adjust to target concentration.
- Adaptable in a broad pH range.

Important product effects that can be achieved by using Dynasylan® HYDROSIL 2775 are:

- Improved mechanical properties - flexural strength, tensile strength, impact strength and 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 2775 helps 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 Operations GmbH, Product Safety Department, E-MAIL sds-hu@evonik.com.

Please consult your local Evonik representative to discuss exact handling (e.g. dilution, wetting, curing temperature)

of Dynasylan® HYDROSIL 2775 with a technical expert to achieve the best possible results in your application.

PACKAGING

Dynasylan® HYDROSIL 2775 is supplied in 25 kg PE cans and 200 kg drums.

STORAGE

It is recommended to store Dynasylan® HYDROSIL 2775 above 4 °C.

However, singular freezing does not influence the product quality. Frozen product is re-useable after complete thawing and homogenization. Just stirring is sufficient for homogenization.

Dynasylan® HYDROSIL 2775 has a flash point $\geq 95^{\circ}\text{C}$ and can be stored and transported advantageously according to different local requirements, compared to flammable liquids (Category 2, 3 and 4), as the most established monomeric alkoxysilane materials are.

SHELF LIFE

Dynasylan® HYDROSIL 2775 has a shelf life of minimum 12 months from delivery in an originally sealed can or drum.

Registration Listings

Registry	Status
China (IECSC)	Information on Request
EU (REACH)	Exempted
South Korea (KECL)	Information on Request
Philippines (PICCS)	Yes
Türkiye (KKDIK)	Pending
USA (TSCA)	Yes

Disclaimer

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