



# Dynasylan<sup>®</sup> Product Range



Dynasylan<sup>®</sup>

The global brand for organofunctional silanes



## Dynasylan®. Experience. Knowledge. Future

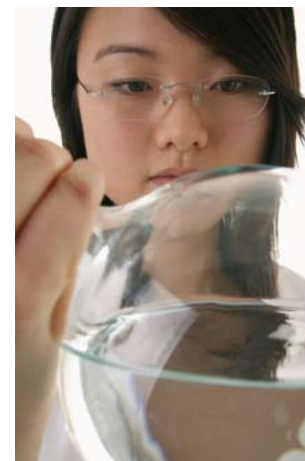
For more than 50 years, the brand Dynasylan® has been synonymous with the investigation, production and application of silanes. Since 1934, the year which saw the first patent for silanes being granted, Evonik and its predecessors have applied for and received more than 400 patents.

Such innovative energy and long-term thinking clearly pay off. Today Dynasylan® products are used successfully throughout the world in paints and coatings, adhesives and sealants, plastics, fiber glass, cables and pharmaceuticals.

On the one hand, our position as one of the world's leading manufacturers of functional silanes is down to the uncompromising quality and purity of our products. But no less important is the broad spectrum of different silane types belonging to the brand Dynasylan®. Under the brand name Dynasylan®, Evonik offers a huge range of different silane product groups. These include, for example, products which have been well-known for decades, such as the aminosilanes, technologically sophisticated and patented systems such as Dynasylan® HYDROSIL or the multifunctional silanes. The aim of this publication is to provide you with an overview of the Dynasylan® products currently available. New product developments can be found in Solution Finder on [www.dynasylan.com](http://www.dynasylan.com).

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## The Future of Silane Technology Is Multifunctionality

With the development of the first multifunctional silanes, the brand Dynasylan® has been able to make important steps toward improving product performance and the efficiency of our customers' production processes.

However, the combination of several functionalities in one Dynasylan® product must not be mistaken for a simple "two-in-one" effect. The chemical and technical combination of two or more functions in one silane affords Dynasylan® new effects or product properties that until now have not been possible. The concept of the new Dynasylan® SIVO products combines this functional advantage with a decisive competitive factor: speed. Dynasylan® SIVO products represent a constantly

growing group of multifunctional silanes. Following on from Dynasylan® SIVO CLEAR and Dynasylan® SIVO 210—two products which have already enjoyed considerable success—are products both for new applications, such as wood preservation and aqueous sol-gel coatings and for more typical applications such as adhesives and solvents, colors and coatings. You will obtain multifunctional silanes of the brand Dynasylan® from the product groups HYDROSIL, SILFIN and SIVO, as monomers or oligomers to achieve special effects. Tables on pages 6 and 7 display all multifunctional Dynasylan® products currently available.

### Oligomers of the brand Dynasylan®

Oligomers are multifunctional silanes which possess, for example, different vinyl, alkyl and amino functional groups, and are characterized by a significantly reduced alcohol release (low VOC). Due to their higher flash point, they offer obvious advantages for handling, storage and production. Furthermore, compared to monomeric silanes, the technical capability of customer systems is, in many cases, surpassed.

### Dynasylan® HYDROSIL

Products from this group of multifunctional silanes are, as the name suggests, water-based, and are produced in a process which has been patented by Evonik. They are non-flammable, water-borne and release no solvents during production and in the end product (VOC free).

### Dynasylan® SILFIN

Products from the SILFIN group are silanes which have a particularly wide range of potential uses due to the combination of a silane molecule with different additives (initiator, catalyst, etc.). They are produced specially for use in the plastic, cable and pipe industries.

### Dynasylan® SIVO and beyond...

Dynasylan® and Dynasylan® SIVO products use the possibilities provided by silane technology to create resistant and easy-to-clean effects for smooth inorganic surfaces. The products are used in the glass and ceramic industry and can be applied also by end-users. In particular, the long-lasting effect is much improved compared to many other systems.

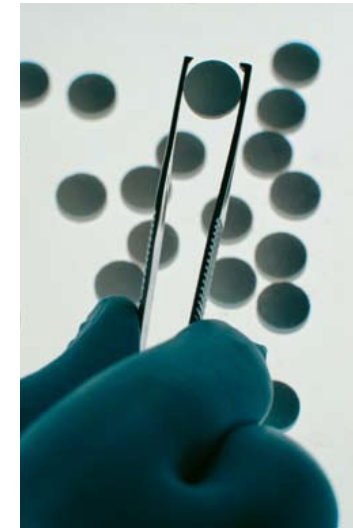
**Multifunctional Silane Systems™**

Chemical Functionality	Additional Functionality	Product Name	Description	Typical Application						
				Adh. Promoter / Coupling Agent	Reagent for Chem. Synthesis	Col binder / Comonomer	Crosslinking Agent	Water Scavenger	Surface Modifier	
<b>Oligomers</b>										
amino / alkyl	oligomeric	Dynasylan® 1146	functional oligosiloxane	●						●
vinyl	oligomeric	Dynasylan® 6490	functional oligosiloxane	●			●	●	●	
vinyl	oligomeric	Dynasylan® 6498	functional oligosiloxane	●			●	●	●	
vinyl / alkyl	oligomeric	Dynasylan® 6598	functional oligosiloxane	●			●	●	●	
alkyl	oligomeric	Dynasylan® 9896	alkylsiloxane							●
<b>HYDROSIL</b>										
amino	water-borne	Dynasylan® HYDROSIL 1151	aqueous siloxane, VOC-free	●			●			●
amino / alkyl	water-borne	Dynasylan® HYDROSIL 2627	aqueous siloxane, VOC-free	●			●			●
diamino	water-borne	Dynasylan® HYDROSIL 2776	aqueous siloxane, VOC-free	●			●			●
amino / alkyl	water-borne	Dynasylan® HYDROSIL 2909	aqueous siloxane, VOC-free	●			●			●
epoxy	water-borne	Dynasylan® HYDROSIL 2926	aqueous siloxane, VOC-free	●	●	●	●	●	●	●
<b>SILFIN</b>										
vinyl	ready-to-use	Dynasylan® SILFIN 06	product for 1-step process (PE crosslinking)					●		
vinyl	ready-to-use	Dynasylan® SILFIN 13	product for 2-step process (PE crosslinking)					●		
vinyl	ready-to-use	Dynasylan® SILFIN 22	product for 2-step process (PE crosslinking)					●		
vinyl	ready-to-use	Dynasylan® SILFIN 25	product for 2-step process for pipes, allows higher throughput					●		
vinyl	ready-to-use	Dynasylan® SILFIN 50	product for 1-step process for pipes					●		
vinyl	ready-to-use	Dynasylan® SILFIN 63	high performance product for 1-step process (PE crosslinking) at ambient conditions					●		

**Multifunctional Silane Systems™**

Chemical Functionality	Additional Functionality	Product Name	Description	Typical Application						
				Adh. Promoter / Coupling Agent	Reagent for Chem. Synthesis	Col binder / Comonomer	Crosslinking Agent	Water Scavenger	Surface Modifier	
<b>SILFIN</b>										
vinyl	ready-to-use	Dynasylan® SILFIN 70	tailor-made product for the 1-step process for EVA-based HFFR compounds					●		
vinyl	ready-to-use	Dynasylan® SILFIN 71	tailor-made product for the 1-step process for PE-based HFFR compounds					●		
vinyl	ready-to-use	Dynasylan® SILFIN 75	high performance product for 1-step process (PE crosslinking), improved handling and storage					●		
vinyl	ready-to-use	Dynasylan® SILFIN 80	all-in-one silane package for cables					●		
<b>Easy-to-clean</b>										
fluoroalkyl	easy-to-clean	Dynasylan® F 8261	tridecafluorooctyltriethoxysilane							●
fluoroalkyl	ready-to-use / easy-to-clean	Dynasylan® F 8263	hydro- / oleophobic treatment in alcohol							●
fluoroalkyl	water-borne / easy-to-clean	Dynasylan® F 8815	hydro- / oleophobic treatment							●
fluoroalkyl	water-borne / easy-to-clean	Dynasylan® SIVO 121	hydro- / oleophobic treatment for wood treatment							●
fluoroalkyl	ready-to-use / easy-to-clean	Dynasylan® SIVO CLEAR	hydro- / oleophobic treatment, 2-component, in alcohol							●
fluoroalkyl	ready-to-use / easy-to-clean	Dynasylan® SIVO CLEAR EC	hydro- / oleophobic treatment, 1-component, in alcohol							●
<b>Others</b>										
amino / alkyl	multidimensional reactivity	Dynasylan® 1189	N-(n-butyl)-3-amino-propyltrimethoxysilane	●	●					●
amino	multidimensional reactivity	Dynasylan® SIVO 210	proprietary aminosilane composition	●	●		●			●
amino	multidimensional reactivity	Dynasylan® SIVO 214	proprietary aminosilane composition	●			●			●
diamino	preformulated	Dynasylan® DAMO-M	proprietary aminosilane composition	●						●

Please note that not every product may be available in every region!



## Dynasylan®. Creating Possibilities Beyond the Imagination

The chemical structure of silanes allows them to link with both organic and inorganic molecules. This special structure has made silanes indispensable to all kinds of markets and applications. Today, there are some processes or products which cannot be imagined without silanes.

During the last few decades, organofunctional silanes of the brand Dynasylan® have mainly been used as additives to improve adhesion or crosslinking, or to modify surfaces. However, silanes are being used more and more as vital components for innovative processes, for example in the case of sol-gel coatings. Further examples for areas of application are:

- Adhesion promoter (e.g., in paints and coatings)
- Crosslinking agent (e.g., in polyolefins for cables and pipes)
- Surface modifier (e.g., in fillers and pigments to improve dispersion or hydrophobicity)
- Water scavenger (e.g., for moisture-sensitive adhesives and sealants)
- Cobinder/Comonomer (e.g., for polymer dispersions, zinc-rich paints or sol-gel systems)
- Reagent (e.g., for chemical and pharmaceutical synthesis)

## Dynasylan®. One Brand. Many Markets

Today there are myriads of possibilities for benefiting from the use of Dynasylan®. New areas of application have constantly been discovered by ongoing research and development along with close contacts to our customers. And we have just entered a novel chapter in Dynasylan® technology –innovative Multifunctional Silane Systems™. So, whether you are thinking about an advanced Dynasylan® product for well-established applications or for the next cutting-edge idea, industry's broadest and most innovative range of organosilanes may offer just the right solution for you.

Here is a selection of products in which silanes play an important role:

- Fiber glass and mineral wool
- Polyolefin compounds for, among other uses, cables, synthetic pipes
- Adhesives and sealants
- Paints and coatings
- Sol-gel systems
- Fillers and pigments
- Foundry and foundry resins
- Silicones
- Pharmaceutically active agents
- Co-catalysts for chemical syntheses (e.g., PP)

Product Overview

Chemical Functionality	Additional Functionality	Product Name	Description	Typical Application					
				Adh. Promoter / Coupling Agent	Reagent for Chem. Synthesis	Co-binder / Comonomer	Crosslinking Agent	Water Scavenger	Surface Modifier
acetoxyl		Dynasylan® BDAC	di-tert-butoxydiacetoxysilane	●	●				
alkyl		Dynasylan® 9116	hexadecyltrimethoxysilane					●	●
alkyl		Dynasylan® 9896	alkylsiloxane						●
alkyl		Dynasylan® IBTEO	isobutyltriethoxysilane						●
alkyl		Dynasylan® IBTMO	isobutyltrimethoxysilane						●
alkyl		Dynasylan® MTES	methyltriethoxysilane						●
alkyl		Dynasylan® MTMS	methyltrimethoxysilane				●		●
alkyl		Dynasylan® OCTCS	octyltrichlorosilane						●
alkyl		Dynasylan® OCTEO	octyltriethoxysilane						●
alkyl		Dynasylan® OCTMO	octyltrimethoxysilane						●
alkyl		Dynasylan® PTEO	propyltriethoxysilane						●
alkyl		Dynasylan® PTMO	propyltrimethoxysilane						●
amino		Dynasylan® 1122	bis(3-triethoxysilylpropyl) amine	●	●		●		●
amino		Dynasylan® 1124	bis(3-trimethoxysilylpropyl) amine	●	●		●		●
amino		Dynasylan® 1505	3-aminopropylmethyldiethoxysilane	●					●
amino		Dynasylan® 1506	3-aminopropylmethyldiethoxysilane preparation	●					●
amino		Dynasylan® AMEO	3-aminopropyltriethoxysilane	●	●	●			●
amino	adjusted reactivity	Dynasylan® AMEO-T	proprietary aminosilane composition	●	●	●			●

Product Overview

Chemical Functionality	Additional Functionality	Product Name	Description	Typical Application					
				Adh. Promoter / Coupling Agent	Reagent for Chem. Synthesis	Co-binder / Comonomer	Crosslinking Agent	Water Scavenger	Surface Modifier
amino		Dynasylan® AMMO	3-aminopropyltriethoxysilane	●			●		●
amino	water-borne	Dynasylan® HYDROSIL 1151	aqueous siloxane, VOC-free	●			●		●
amino	multidimensional reactivity	Dynasylan® SIVO 210	proprietary aminosilane composition	●	●		●		●
amino	multidimensional reactivity	Dynasylan® SIVO 214	proprietary aminosilane composition	●	●		●		●
amino		Dynasylan® TRIAMO	tri-amino-functional propyltriethoxysilane	●					
amino/alkyl	oligomeric	Dynasylan® 1146	oligosiloxane	●					●
amino/alkyl	multidimensional reactivity	Dynasylan® 1189	N-(n-butyl)-3-aminopropyltriethoxysilane	●	●				●
amino/alkyl	water-borne	Dynasylan® HYDROSIL 2627	aqueous siloxane, VOC-free	●			●		●
amino/alkyl	water-borne	Dynasylan® HYDROSIL 2909	aqueous siloxane, VOC-free	●			●		●
amino/alkyl		Dynasylan® 1161	cationic benzylamino-functional silane hydrochloride, 50% in methanol	●					●
aryl		Dynasylan® 9165	phenyltriethoxysilane	●		●			●
aryl		Dynasylan® 9265	phenyltriethoxysilane	●		●			●
diamino		Dynasylan® 1411	2-aminoethyl-3-aminopropylmethyldimethoxysilane	●			●		●
diamino		Dynasylan® DAMO	2-aminoethyl-3-aminopropyltriethoxysilane	●			●		●

Product Overview

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				Adh. Promoter / Coupling Agent	Reagent for Chem. Synthesis	Co-binder / Comonomer	Crosslinking Agent	Water Scavenger	Surface Modifier	
diamino	preformulated	Dynasylan® DAMO-M	proprietary aminosilane composition	●						●
diamino	adjusted reactivity	Dynasylan® DAMO-T	proprietary aminosilane composition	●			●			●
diamino	water-borne	Dynasylan® HYDROSIL 2776	aqueous siloxane, VOC-free	●			●			●
epoxy		Dynasylan® GLYEO	3-glycidylloxypropyltriethoxysilane	●		●	●			
epoxy		Dynasylan® GLYMO	3-glycidylloxypropyltrimethoxysilane	●		●	●			
epoxy	water-borne	Dynasylan® HYDROSIL 2926	aqueous siloxane, VOC-free	●		●	●			●
fluoroalkyl	easy-to-clean	Dynasylan® F 8261	tridecafluorooctyltriethoxysilane							●
fluoroalkyl	ready-to-use / easy-to-clean	Dynasylan® F 8263	hydro- /oleophobic treatment in alcohol							●
fluoroalkyl	water-borne / easy-to-clean	Dynasylan® F 8815	hydro- /oleophobic treatment							●
fluoroalkyl	water-borne / easy-to-clean	Dynasylan® SIVO 121	hydro- /oleophobic wood treatment							●
fluoroalkyl	ready-to-use / easy-to-clean	Dynasylan® SIVO CLEAR	hydro- /oleophobic treatment, 2-component, in alcohol							●
fluoroalkyl	ready-to-use / easy-to-clean	Dynasylan® SIVO CLEAR EC	hydro- /oleophobic treatment, 1-component, in alcohol							●
glycol		Dynasylan® 4144	polyether-functional trimethoxysilane							●
mercapto		Dynasylan® MTMO	3-mercaptopropyltrimethoxysilane	●			●			●

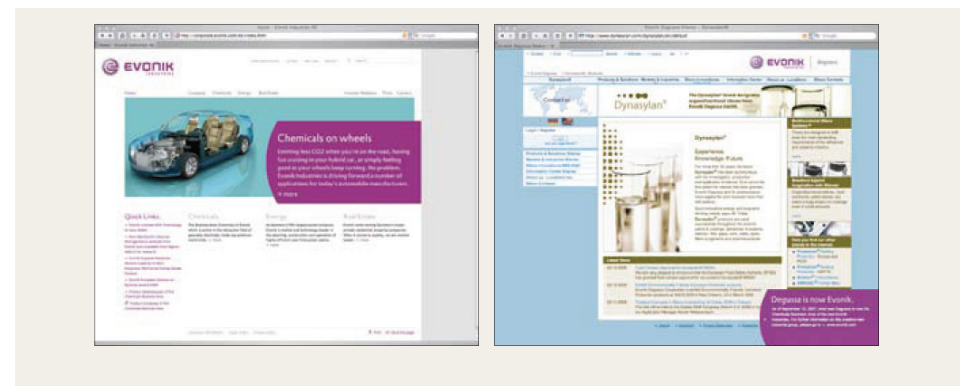
Product Overview

Chemical Functionality	Additional Functionality	Product Name	Description	Typical Application						
				Adh. Promoter / Coupling Agent	Reagent for Chem. Synthesis	Co-binder / Comonomer	Crosslinking Agent	Water Scavenger	Surface Modifier	
methacryl		Dynasylan® MEMO	3-methacryloxypropyltrimethoxysilane	●			●	●		
silicic acid ester		Dynasylan® 40	ethyl polysilicate				●	●		
silicic acid ester		Dynasylan® A	tetraethyl orthosilicate				●	●		
silicic acid ester		Dynasylan® AR	preparation of hydrolyzed ethylpolysilicate and silica sol					●		
silicic acid ester		Dynasylan® M	tetramethyl orthosilicate				●	●		
silicic acid ester		Dynasylan® MKS	preparation of an ethyl polysilicate binder					●		
silicic acid ester		Dynasylan® P	tetra-n-propyl orthosilicate					●	●	
silicic acid ester		Dynasylan® XAR	preparation of an ethyl-polysilicate hydrolysate and silica sol					●		
silyl		Dynasylan® BSA	N, O-bis (trimethylsilyl) acetamide					●		
silyl		Dynasylan® HMDS	hexamethyldisilazane					●		●
silyl		Dynasylan® TES	triethylsilane					●		
silyl		Dynasylan® TMSCN	trimethylsilylnitrile					●		
ureido		Dynasylan® 2201 EQ	3-ureidopropyltriethoxysilane, 50% in methanol, ethylcarbamate-free	●					●	●
vinyl	oligomeric	Dynasylan® 6490	vinylsilane, oligomeric	●					●	●
vinyl	oligomeric	Dynasylan® 6498	vinylsilane, oligomeric	●					●	●
vinyl	ready-to-use	Dynasylan® SILFIN 06	product for 1-step process (PE crosslinking)						●	

## Product Overview

Chemical Functionality	Additional Functionality	Product Name	Description	Typical Application					
				Aadh- Promoter / Coupling Agent	Reagent for Chem- Synthesis	Co-binder / Comonomer	Crosslinking Agent	Water Scavenger	Surface Modifier
vinyl	ready-to-use	Dynasylan® SILFIN 13	product for 2-step process (PE crosslinking)				●		
vinyl	ready-to-use	Dynasylan® SILFIN 22	product for 2-step process (PE crosslinking)				●		
vinyl	ready-to-use	Dynasylan® SILFIN 25	product for 2-step process for pipes, allows higher throughput				●		
vinyl	ready-to-use	Dynasylan® SILFIN 50	product for 1-step process for pipes				●		
vinyl	ready-to-use	Dynasylan® SILFIN 63	high performance product for 1-step process (PE crosslinking) at ambient conditions				●		
vinyl	ready-to-use	Dynasylan® SILFIN 70	tailor-made product for the 1-step process for EVA-based HFFR compounds				●		
vinyl	ready-to-use	Dynasylan® SILFIN 71	tailor-made product for the 1-step process for PE-based HFFR compounds				●		
vinyl	ready-to-use	Dynasylan® SILFIN 75	high performance product for 1-step process (PE crosslinking) improved handling and storage				●		
vinyl	ready-to-use	Dynasylan® SILFIN 80	all-in-one silane package for cables				●		
vinyl		Dynasylan® VTC	vinyltrichlorosilane				●		
vinyl		Dynasylan® VTEO	vinyltriethoxysilane	●			●	●	●
vinyl		Dynasylan® VTMO	vinyltrimethoxysilane	●		●	●	●	●
vinyl		Dynasylan® VTMOEO	vinyltris (2-methoxyethoxy) silane	●			●	●	●
vinyl/alkyl	oligomeric	Dynasylan® 6598	vinyl-functional oligo-siloxane	●			●	●	●
vinylbenzyl	oligomeric	Dynasylan® 1175	cationic vinylbenzyl-amino-functional silane hydrochloride, 40% in methanol	●					●

Please note that not every product may be available in every region!



## Dynasylan® on the Web

Information, addresses, contacts.

The website [www.dynasylan.com](http://www.dynasylan.com) provides you with a well-structured information platform, where you will find everything you need to know on products, procedures and chemical processes. Via a Solution Finder, you can also download product information and safety data sheets as well as informative brochures or presentations.

The worldwide database with Evonik contact persons and traders allows you at any time comfortable and easy access to important contact data.

[www.dynasylan.com](http://www.dynasylan.com)

[www.evonik.com](http://www.evonik.com)



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