

Dynasylan® F 8815

Modified fluoroalkyl siloxane, water borne

Technical data

Properties and test methods	Value	Unit	Method
Density (20 °C)	approx. 1.058	g/cm ³	DIN 51757
Viscosity (20 °C)	approx. 1.6	mPa.s / cSt	-
Flash point	> 95	°C	DIN EN ISO 2719
Boiling point (1.013 hPa)	97	°C	ASTM D - 1120

Registrations

Dynasylan® F 8815

EINECS/ELINCS (EU):	Yes
AICS (Australia):	No
DSL/NDL (Canada):	No
PICCS (Philippines):	No
TSCA (USA):	Yes (Spraying is prohibited)
IECS (P.R. China):	Yes
ENCS (Japan):	No
ECL (South Korea):	Yes

Dynasylan® F 8815 is a fluoroalkylfunctional water-borne oligosiloxane which acts as a surface modification agent on oxidic, carboxy- and hydroxyfunctional substrates for example ceramic, natural fibers like cotton or leather.

Dynasylan® F 8815 is a yellowish, slightly turbid liquid. The product can be mixed with water to any desired concentration.

Safety and handling

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 after registration on our website www.dynasylan.com or upon request from your local representative, customer service or from Evonik Resource Efficiency GmbH, Product Safety Department, E-MAIL sds-hu@evonik.com.

Packaging, storage and shelf life

Dynasylan® F 8815 is supplied in 25 or 200 kg drums.

Dynasylan® F 8815 should be protected from freezing and temperatures above 40 °C.

In the original closed container, the shelf life of Dynasylan® F 8815 is min. 12 months from delivery.

Properties and applications

Dynasylan® F 8815 can be used in a great variety of applications.

Examples:

- Additive for sol-gel/ hybrid systems
- Modification of paints and varnishes
- Hydrophobation of leather
- Water- and oil-repellent, easy-to-clean treatment of textiles

Reactivity

Dynasylan® F 8815 is a trifunctional organic compound: The reactive silanol groups can bind chemically to an inorganic substrate. Aminoalkyl-functional substituents provide solubility in water. The fluoroalkyl-functional groups impart an extremely low specific surface energy once the siloxane is homogeneously distributed on the substrate.

Similar coatings with good hydro- and oleophobicity can be obtained with commercially available fluorocarbon compounds. A general advantage of Dynasylan® F 8815 is the ability to create a chemical bond to the substrate system. Subsequent horizontal crosslinking then takes place forming 2- and 3-dimensional networks.

Thus starting from very low concentrations Dynasylan® F 8815 forms chemically, thermally and mechanically stable coatings.

Processing

Substrate surfaces need to be absolutely clean and degreased before treatment!

Dynasylan® F 8815 can be mixed with water in any proportion. Before using the product must be mixed thoroughly to homogenize it. The exact concentration required may slightly vary upon the desired application. A ready-for-use solution can be stored for several days.

Textiles such as cotton can be dipped in or sprayed with a 5-15 wt.-% aqueous solution of Dynasylan® F 8815. The dipping time which corresponds to the reaction time should be 0.5-10 minutes.

A good hydrophobic effect on leather can be obtained by polishing the Dynasylan® F 8815 on to the material.

A thin polysiloxane coating is formed and its specific properties emerge within a few hours at room temperature. The crosslinking process can be accelerated by heating (80-150 °C). Hydro- and oleophobic properties can be determined by measuring the static contact angle.

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Europe/Middle-East/Africa/RoW
Evonik Resource Efficiency GmbH

Business Line Silanes
 Rodenbacher Chaussee 4
 63457 Hanau-Wolfgang
 Germany
 PHONE +49 6181 59 13636
 FAX +49 6181 59 713915
 dynasytan@evonik.com
 www.dynasytan.com

North America
Evonik Corporation

Business Line Silanes
 299 Jefferson Road
 Parsippany, NJ 07054-0677
 USA
 PHONE (TOLL FREE) +1 800 237 67 45
 PHONE +1 973 929 8513
 FAX +1 973 929 8503
 dynasytan@evonik.com
 www.dynasytan.com

North America
Silbond Corporation

9901 Sand Creek Highway
 Weston, MI 49289
 USA
 PHONE +1 517 436 9316
 FAX +1 517 436 3148
 dynasytan@evonik.com
 www.dynasytan.com

Latin America
Evonik Brasil Ltda.

Business Line Silanes
 Alameda Campinas, 579
 01404-000 São Paulo-SP
 Brazil
 PHONE +55 11 3146 4123
 FAX +55 11 3146 4148
 dynasytan@evonik.com
 www.dynasytan.com

Asia / Pacific
Evonik (SEA) Pte. Ltd.

Business Line Silanes
 3 International Business Park
 #07-18, Nordic European Centre
 Singapore 609927
 PHONE +65 6809 6576
 FAX +65 6809 6699
 dynasytan@evonik.com
 www.dynasytan.com

Asia / Pacific
Evonik Specialty
Chemicals (Shanghai) Co. Ltd.

Business Line Silanes
 55, Chungdong Road
 Xinzhuang Industry Park
 Shanghai 201108
 P.R. China
 PHONE +86 21 61191-399
 FAX +86 21 61191-648
 dynasytan@evonik.com
 www.dynasytan.com

Asia / Pacific
Evonik Korea Ltd.

Business Line Silanes
 94, Galsan 1-dong
 Bupyeong-gu
 Incheon, 403-081
 Korea
 PHONE +82 2320 4773
 FAX +82 2783 2520
 dynasytan@evonik.com
 www.dynasytan.com

Asia / Pacific
Evonik Taiwan Ltd.

Business Line Silanes
 Artist Construction Bldg.
 9F, No. 133
 Min Sheng East Road, Sec 3
 Taipei, 105 Taiwan, R.O.C.
 Taiwan 10596
 PHONE +886 227 17 1242
 FAX +886 227 17 2106
 dynasytan@evonik.com
 www.dynasytan.com

Asia / Pacific
Evonik Japan Co. Ltd

Business Line Silanes
 12th Floor Monolith Building
 2-3-1, Nishi-Shinjuku-ku
 Tokyo 163-0912
 Japan
 PHONE +81 353 23 7446
 FAX +81 353 23 7397
 dynasytan@evonik.com
 www.dynasytan.com

Asia / Pacific
Evonik India Pvt. Ltd.

Business Line Silanes
 Krislon House
 Saki Vihar Road, Anderi (E)
 Mumbai - 400 072
 India
 PHONE +91 226 7238 809
 FAX +91 226 7238 811
 dynasytan@evonik.com
 www.dynasytan.com