

Product Information

Dynasylan® F 8263

Fluoroalkylsilane formulation, ready-to-use in isopropanol

CAS NUMBER

confidential

PRODUCT DESCRIPTION

Dynasylan® F 8263 acts as a surface modifier on oxidic, carboxy- and hydroxyfunctional substrates (e.g. glass, ceramic).

Dynasylan® F 8263 is a colorless liquid. It can be diluted in alcohols and various other organic solvents, e.g. n-hexane, xylol, acetone or ethyl acetate.

Dynasylan® F 8263 is a bifunctional organic compound: The silicon functional alkoxy groups can react with oxides, hydroxy and carboxy functions on the surface of a substrate. They hydrolyze with water and can establish a permanent chemical bond by elimination of ethanol/water. The fluoroalkylfunctional group provides a low energy surface.

Excellent hydrophobic and oleophobic surface properties can also be achieved by treatment with commercial fluoro-carbon surfactants and resins. However, besides providing these properties Dynasylan® F 8263 can bond chemically to the surface thus creating a Si-O-substrate-bond. Subsequently, horizontal crosslinking takes place, predominantly upon evaporation of the solvent. Finally 2- and 3-dimensional networks are formed.

Dynasylan® F 8263 is a ready-for-use product and can be directly applied on a surface. Subsequently, stable coatings with a thickness of some nanometers are formed.

Through a special catalyst system which is part of the formulation, Dynasylan® F 8263 can establish coatings on several at least slightly polar polymers, like polymamide, PMMA and polycarbonate.

Typical Properties

Property	Unit	Value
Chemical Name		Fluoroalkylsilane formulation, ready-to-use in isopropanol
Density (20 °C) DIN 51757	g/cm ³	0.80
Flash Point, min. DIN EN ISO 13736	°C	21
Viscosity (20 °C) DIN 53015	mPa·s	2

The data represents typical values (no product specification)

TYPICAL APPLICATIONS

Dynasylan® F 8263 can be used highly beneficial in a vast variety of commercial applications:

- Anti-soiling, water-repellent, UV-resistant coating of float glass (constructive glazing)
- Treatment of automotive glass (wiperless windshield)
- Coatings on polymers
- Anti-soiling coatings of ceramic and enamel

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.

Surfaces need to be absolutely clean and degreased before treatment! For a primer treatment (e.g. on glass) Dynasylan® F 8263 can be applied by polishing with a paper pad (or soft cotton cloth, sponge etc.), which had been previously soaked with the formulation. It is important to maintain a homogeneous liquid film on the whole

surface to be treated. A contact time of at least 2 minutes with the surface is required. If the liquid starts to evaporate, thus leaving some exposed domains, additional Dynasylan® F 8263 has to be added. Proper conditions have to be evaluated in detail according to the specific kind and reactivity of the surface. Hydro-/oleophobicity almost immediately appears upon treatment (autophobic effect) and the phenomenon will increase further over a couple of minutes. Complete crosslinking will take hours to several days at room temperature because the process will be continued long after the treated area has become visibly dry. However, a nearly complete crosslinking can be accelerated by heating the workpiece at 80–150 °C for several hours in a drying oven. Thereafter, eventually formed silicon spots on the surface can be removed by polishing with a smooth pad which had been previously impregnated with a few drops of ethanol. Polishing aids (sponge, pads) have to be clean and dry before use and reuse is only recommended upon careful cleaning. The formed polysiloxane film is completely invisible and will not lead to any optical impairment on the substrate.

PACKAGING

Dynasylan® F 8263 is supplied in drums and containers containing 20 kg, 150 kg and 750 kg.

SHELF LIFE

In the original closed container, the shelf life of Dynasylan® F 8263 is min. 6 months from delivery.

Registration Listings

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

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