

## Product Information

# Dynasytan® 2201 EQ

Ureidopropyltrialkoxysilane (methoxy-, ethoxy-) in alcohol (50%)

## CAS NUMBER

confidential

## PRODUCT DESCRIPTION

Dynasytan® 2201 EQ is a bifunctional organosilane possessing a reactive organic ureido group and a hydrolyzable inorganic triethoxysilyl group.

The dual nature of its reactivity allows Dynasytan® 2201 EQ to bind chemically to both inorganic materials (e.g. glass, metals, fillers) and organic polymers (e.g. thermosets, thermoplastics, elastomers), thus functioning as an adhesion promoter and as a surface modifier. Dynasytan® 2201 EQ is a 50% solution of silane in methanol, is a colorless-yellowish liquid with an alcohol-like odor and is soluble in alcohols, ketones, esters or aromatic hydrocarbons.

it can be solved in water, while the alkoxysilyl groups are hydrolysed and alcohol is released.

Due to novel patented process, Dynasytan® 2201 EQ is the first ureidofunctional silane, which contains no carcinogenic by-products, e.g. ethylcarbamate. Dynasytan® 2201 EQ is therefore not classified as "carcinogenic, class 2".

### Typical Properties

Property	Unit	Value
<b>Density</b> (20 °C) DIN 51757	g/cm <sup>3</sup>	0.910-0.925
<b>Flash Point, min.</b> DIN 51755	°C	11
<b>Refractive Index</b> (20 °C) DIN 51423		1.380
<b>Viscosity</b> (20 °C) DIN 53015	mPa·s	<10

The data represents typical values (no product specification)

## TYPICAL APPLICATIONS

Dynasytan® 2201 EQ finds application in the products of many industries.

Examples are:

- as a size constituent of finish for glass fiber/glass fabric composites
- as an additive to phenolic, furan and melamine resins for foundry resins and abrasives
- as an additive for sealants and adhesives
- as an additive and/or primer for paints and varnishes to improve adhesion to the substrate

## BENEFITS & ADVANTAGES

Important product effects that can be achieved through the use of Dynasytan® 2201 EQ are:

- improved mechanical properties: e.g. flexural strength, tensile strength, impact strength, modulus of elasticity
- improved resistance to moisture and corrosion
- higher temperature of deflection under load
- increased filler content and better dispersion
- improved adhesion between inorganic surfaces and organic polymers

## DOSAGE

In the presence of water, the ethoxy (Si-OC<sub>2</sub>H<sub>5</sub>) groups of Dynasytan® 2201 EQ hydrolyze to form reactive silanol (Si-OH) groups which can bond to a variety of inorganic substrates. The organophilic ureido group of Dynasytan® 2201 EQ can react with a suitable polymer. Hydrolysis of Dynasytan® 2201 EQ can be catalyzed by acids.

Examples of suitable inorganic substrates are glass, glass fibers, glass wool.

Dynasytan® 2201 EQ may be used with such polymers as epoxy, phenolic, furan and melamine resins, polyurethanes, PA, PBT, PE, EVA, PP, PVB, PVAC, acrylics and silicones.

Dynasytan® 2201 EQ can be used for as a primer (approx. 1-10 wt.% solution in an organic solvent such as alcohol), or as a constituent of an aqueous size or solution.

## 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](mailto:sds-hu@evonik.com).

## PACKAGING

Dynasylan 2201 EQ is supplied in 25 kg or 180 kg drums and 900 kg IBC.

## STORAGE

Local regulations have to be followed and applied.

From technical point of view a storage between 4°C and 40°C is beneficial.

The material is stable as long as not exposed to air or moisture.

## SHELF LIFE

In the original unopened container Dynasylan® 2201 EQ has a shelf life of at least 12 months from delivery.

### Registration Listings

Registry	Status
Australia (AIIC)	Yes
Canada (DSL)	Yes
China (IECSC)	Yes
European Union (EINECS/ELINCS)	Yes
Japan (ENCS)	Yes
South Korea (KECL)	Yes
Philippines (PICCS)	Yes
United States of America (TSCA)	Yes

### Disclaimer

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