

Dynasytan® SIVO CLEAR SET K1

Dynasytan® SIVO CLEAR is a 2-component system for hydro- and oleophobic treatment of e.g. glass and ceramic surfaces.

- Component 1 -

Each component has its own material safety data sheet.

Technical data

Properties and test methods	Value	Unit	Method
Flash point	< 15 °C	Dynasytan® SIVO CLEAR K1	DIN 51755
Density (20 °C)	0.8 g/cm ³	Dynasytan® SIVO CLEAR K1	DIN 51757
Viscosity (20 °C)	2 mPa.s	Dynasytan® SIVO CLEAR K1	DIN 53015
Flash point	18 °C	Dynasytan® SIVO CLEAR K2	DIN 51755
Density (20 °C)	0.89 g/cm ³	Dynasytan® SIVO CLEAR K2	DIN 51757
Viscosity (20 °C)	3.7 mPa.s	Dynasytan® SIVO CLEAR K2	DIN 53015

Registrations

Dynasytan® SIVO CLEAR SET K1

EINECS/ELINCS (EU):	Yes
AICS (Australia):	Yes
DSL/NDSL (Canada):	No
PICCS (Philippines):	No
TSCA (USA)	Yes; for Professional or Industrial Use Only. It is
a violation of Federal Law for this product to be	distributed to or used by Consumers (40 CFR 721.3)
IECSC (P.R. China)	Yes
ENCS (Japan)	No
ECL (South Korea)	Yes

Dynasytan® SIVO CLEAR is a user-friendly 2-component coating system for smooth surfaces such as glass.

The right amount of formulation is achieved by mixing the two components 1:1 (by volume). This total formulation is ready for application after about 3 minutes of shaking or stirring. It should be used within 1 day. This gives the user flexibility in designing the working steps and prevents waste. The consumption of the ready-to-use solution depends on the application method, mostly about 50 ml/m² are sufficient.

Safety and handling

Before considering the use of Dynasytan® 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.dynasytan.com or upon request from your local representative, customer service or from Evonik Operations GmbH, Product Safety Department, E-MAIL sds-hu@evonik.com.

Packaging, storage and shelf life

The two-component product Dynasytan® SIVO CLEAR is delivered in two separate steel drums with plastic linings (2 x 25 l, 2 x 180 l).

In the originally sealed containers Dynasytan® SIVO CLEAR K1 and K2 has a shelf life of min. 12 months from delivery.

The mixed formulation must be used within 1 day. For further information please write to dynasytan@evonik.com

Properties and applications

Treatment of windshields:

- Better visibility in the rain, particularly on throughways and rural roads
- In winter: obviates time-consuming de-icing
- In summer: insect splatter easier to remove

Easy-to-clean glass components of shower stalls, sanitary ceramics:

- Lime and soap residues easy to remove
- Aggressive cleaning agents are not needed. A wet cloth is generally sufficient

Easy-to-clean surfaces on other glass objects (e.g. greenhouses, canopies, skylights, etc.):

- The cleaning cycle is extended
- Less cleaning agent is needed
- Dirt is easier to remove

Processing

Do not apply the product at temperatures below 10 °C!

Do not expose surfaces to be treated to sunlight! Make sure that the surface is not hot. Provide adequate ventilation and fresh air.

If the surface was treated in the past with a different water repellent material, repeated cleaning with a polishing agent is crucial.

Step 1: Mixing the Coating Formulation

Mixing of the formulation at room temperature is recommended. Before treating the surface, Dynasylan® SIVO CLEAR K2 should be mixed with Dynasylan® SIVO CLEAR K1 1:1 (by volume, e.g. 2 x 50 ml). The obtained formulation should be shaken for a minimum of **3 minutes**. After that the solution is ready to use, and has to be used **within 1 day**.

Before the application of this mixture, the substrate has to be cleaned. Meanwhile keep the mixture unstirred. The temperature during processing should be in the range of 10–30 °C, preferably **15–25 °C**.

Step 2: Cleaning the Surface

In order to permit sufficient chemical bonding of Dynasylan® SIVO CLEAR to the substrate, the surfaces have to be carefully cleaned before the application. The long-term stability and abrasion resistance of the coating depends on how well Dynasylan® SIVO CLEAR is chemically bonded.

The surfaces to be treated can be cleaned with a commercial glass cleaner. After that they should be polished until the surface is dry. For an optimum pretreatment of the surface, we recommend an abrasively cleaning with a 30 % aqueous cerium oxide* slurry. **The slurry should be shaken thoroughly before use.** The cerium oxide slurry can be applied with a cotton cloth or paper towel and should be polished uniformly as a thin liquid film for several minutes. Subsequently, the film is allowed to dry.

The dried cerium oxide is wiped off with a clean, dry paper cloth (it may have to be repolished several times with a new paper cloth). The cerium oxide should be completely removed. The abrasive cleaning ensures a completely clean and reactive glass surface. Just after the abrasive cleaning, the surface should be coated.

Step 3: Treatment Process

Direct exposure to sunlight during application should be avoided. In the case of windshield treatment, the two halves of the windshield (left/right) should be treated one after the other. A certain amount of the Dynasylan® SIVO CLEAR formulation obtained in step 1 is applied as a thick liquid film and should be polished quickly and uniformly with a paper towel for at least ½ -1 minutes. In case the solvent evaporates before it has been uniformly polished in, more formulation needs to be applied. Do not let the film dry sporadically. **Before** the formulation dries, excess solution should be polished off with a clean paper cloth. Residues of dried formulation and grey streaks can be polished off completely using a clean piece of paper towel. Persisting residues can be polished off completely using a small amount of Dynasylan® SIVO CLEAR formulation and a clean paper cloth.

A hydrophobic effect generally can be seen depending on the substrate, reactivity and temperature already after about 5–15 min and is further enhanced after a few minutes.

Anyhow it is recommended to let the coating dry for at least 30 minutes. In the case of windshield treatment please do not use the wipers during this time.

Renewing Already Coated Glass Surfaces

The coating with Dynasylan® SIVO CLEAR is long-lasting. Once the effects wear off, the surface can be re-coated. For a re-coating the cleaning with cerium oxide and the application of Dynasylan® SIVO CLEAR are done in the same way as the first treatment. If the glass was treated with a different coating before, repeated treatment with an abrasive cleaner is vital.

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