

Technical Data Sheet

DYPHOX Universal 510-R

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Product description: DYPHOX Universal 510-R is a high-quality antimicrobial coating. By applying the DYPHOX coating you significantly reduce the risk of surface-mediated transmission of microorganisms (e.g. bacteria and viruses).

Chemical and physical properties

DYPHOX	Universal 510-R
Density [g/ml] at 25 °C (77 °F)	0.82
Consumption values for 1 m ² [mL]	30
Binder base	Hydrolyzed, condensed silanols
Solid content [vol.%]	4.5 – 5.0
Water content [vol.%]	7
Min. shelf life at 25 °C (77 °F) [month]	12
Flash point [°C]	15 (63 °F)
Recommended layer thickness [µm]	< 1
VOC content [g/L]	690*
Duration of antimicrobial effect	1 year
Gloss level	< 5 Gloss
Colour and appearance	Yellowish, transparent

This information is intended as a guide and is not intended to create specifications.

* Directive 2004/42/EC (cat. A/h) or the German regulation on the limitation of emissions of volatile organic compounds (ChemVOCFarbV) (cat. 1.h): 750 g/l (2010). This product contains max. 750 g/l VOC.

Surface preparation


Surfaces must be dry and free of grease and dust before every DYPHOX coating. The surfaces are cleaned with DYPHOX Cleaner A02 and a microfiber cloth. Clean stubborn dirt with silicone remover. Before beginning with the coating, allow the cleaned surface to dry for min. 3 minutes.

Substrates

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Before coating with DYPHOX, the substrate must be tested for compatibility in an inconspicuous area. When coating some substrates, DYPHOX Primer A09V must also be used to promote adhesion (see table). The following substrates require a primer:



Substrate	Examples	Type	Primer A09V
Metal	Stainless steel, aluminum	Metal	No
Mineral materials	Corian, Hi-Macs	Hard plastics	Yes
Coating materials	Melamine	Hard coatings	Yes
Polyolefin polymers	PE, PP	Medium-hard plastics	Yes
Polystyrene copolymers	ABS, ASA, SAN	Hard plastics	Yes
Elastic polymers	Flexible PVC, TPU	Soft plastics	Yes
Rigid plastics	Rigid PVC, PC, PS	Hard plastics	Yes
Glass	Borosilicate	Glasses	No

The coating cannot be applied to acrylic glass, chrome, Teflon (PTFE) or fluorinated plastics (e.g. PVF, fluororubbers). There is also no adhesion on special pre-treated surfaces such as anti-stick or anti-fingerprint coatings and surfaces with lotus effect. We do not recommend to coat high-gloss surfaces.



Drying times at 20 °C (68 °F) guideline values

DYPHOX	Universal 510-R
Dust-dry [min]	10
Grip-proof [min]	30
Loadable (cleaning)	24 hours

Final curing occurs after more than 24 hours. Application of the coating below + 10 °C (58 °F) is not recommended.



Processing window at 20 °C (68 °F)

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processing window [min]	5

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These drying parameters are guide values. They can vary greatly depending on the used amount, substrate, humidity and ambient temperature. At higher temperatures, the drying times are reduced depending on the ambient conditions. The relative humidity should be between 20% and 70% during processing.

Protection

When handling the product, wear chemical protective gloves and protective goggles. In addition, wear a respiratory protective mask (FFP2) when using the spray bottles to coat the keyboards. For further information please refer to the Safety Data Sheet.

Storage/Shelf life

Take the liquid from the container by pouring or pumping directly onto a cloth as described in the coating instructions. Do not touch the opening, even with a rag or cloth. In addition, close the container immediately after use.

Important: Remainders from the application bottle must not be poured back into the original container.

Store the tightly closed containers in a cool ($\leq 25\text{ °C}$ / 77 °F), dry place. Protect from light and direct sunlight, heat and frost. Under ideal storage conditions, the shelf life is at least 12 months in unopened original packaging.

Use up opened packages within 4 months after first opening.

Notes!

- Complete data on inhalation toxicity is not available.
- It is not allowed to apply the product with spray guns (e.g. electro spray) or similar technical equipment that produces mist. There is a risk of fire and explosion! So follow the coating instruction.
- Coated surfaces may not be cleaned for at least 24 hours with any commercially available cleaning agent.

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- In some cases, the use of harsher cleaning agents will damage the coating. Do not use abrasive cleaning agents (e.g. scouring milk) or superalkaline ($\text{pH} > 10$) and strongly acidic ($\text{pH} < 3$) cleaners.

Use biocides safely. Always read the label and product information before use.



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The information in this data sheet has been compiled in line with the latest state of the art of technology. All information has been provided to the best of our knowledge. However, any liability for the general validity of the individual recommendations must be excluded, as the application and processing methods are beyond our control. We therefore accept no liability or guarantee for this and reserve the right to make technical changes at any time.

Please refer to our Safety Data Sheet for the safety characteristics.

These instructions lose their validity after publication of a new edition by us and are only valid in