SILRES BS 6920

BINDER

Product description

SILRES BS 6920 is a silane-terminated binder based on α-silane technology for the impregnation of mineral substrates or as a thin layer coating for mineral substrates or wood.

Properties

α-silane-terminated polyethers represent a noteworthy group of moisture curing binders that do not require tin catalysis.
SILRES BS 6920 is a transparent, low viscosity binder.

Primarily, cure via amines is recommended, with particular focus on amino-silanes. Pot life as well as speed of through-cure can be adjusted by the aminosilane loading.
GENIOSIL® GF 9 (~ 5 %) is recommended.

Special features

SILRES BS 6920 is characterised by:

- low viscosity
- solvent and plasticizer free
- easy handling and dosing
- resistant to moisture
- cure without tin catalyst
- non-labeling

Application

Formulations based on SILRES BS 6920 are applied for stain-resistant impregnation and coating of mineral substrates, e.g. polished or non-polished concrete floors, paving stones, clinker, bricks and natural stone. Additionally, SILRES BS 6920 can be used as a wood coating binder for interior use, e.g. parquet flooring and furniture.

For the impregnation of absorbent substrates SILRES BS 6920 is treated with 5 % of the aminosilane GENIOSIL® GF 9 as the catalyst. If necessary the viscosity of the formulation can be reduced by the addition of 20 - 30 % of a solvent (e.g. Shell Kristallöl K 30).

For substrates with poor or no absorbency, a catalysed SILRES BS 6920 version can be applied as a clear coating. The layer thickness should not exceed 100 µm to ensure full and complete cure. Cure is usually complete after 24 h. In the case of higher absorbent substrates a second coating is recommended. In the case of coatings it is recommended to add UV stabilizers since even for interior use UV exposure cannot be excluded. Further formulating components comprise rheological additives and matting agents. Additionally, pigmented and filled coatings are equally possible with SILRES BS 6920. The binder content will be up to ~ 40 %.

The catalysed formulations are sensitive towards moisture, however, stable in sealed packaging for at least 1 year. This is the unique benefit of SILRES BS 6920: Final formulations can be offered as one part systems for the end user. SILRES BS 6920 imparts high stain-resistance when applied as an impregnation or as a coating (e.g against stains like coffee, tea, ketchup, orange juice, ink, red wine, household and engine oils etc). Surfaces exhibit high strength, are exceedingly scratch-resistant and impervious to typical cleaning agents.

Processing

For formulators:

SILRES BS 6920 is easily mixed in a standard mixer or dissolver with the formulation ingredients. The catalyst GENIOSIL® GF 9 is added as the final component. Upon catalyst addition the mixture becomes moisture sensitive, thus air contact must be avoided. Use of an inert gas or fast filling in sealed packaging is recommended.

Example of formulation for impregnation :
75 parts of SILRES BS 6920
20 parts of Shell Kristallöl K 30
5 parts of GENIOSIL® GF 9

Example of formulation for clear coating:
94 parts of SILRES BS 6920
1 part of Tinuvin® B75
5 parts of GENIOSIL® GF 9

Example of formulation for white pigmented and filled formulation:
38 parts of SILRES® BS 6920
56 parts of quartz powder W8
3 parts of titanium dioxide
1 part of Tinuvin® B75
2 part of GENIOSIL® GF 9

For the end user:

During application of formulations based on SILRES BS 6920 whether for impregnation or coating, the surface must be dry and clean. To define the optimum amount and to check applicative behavior it is recommended to prepare a separate test surface. The material can be applied with a cleaning mop, shorthair roller or a brush. Airless spray application is equally possible.
The open time of the formulation examples outlined here is ~ 20 min depending on temperature and humidity. Treated surfaces are trafficable and durable after 24 hours.

Depending on the absorbency behavior of the substrate a second application (after 24 hours) may be necessary to attain a homogeneous finish. Depending on the absorbency behavior of the substrate ~ 50 - 150 g/m^2 are typically required for the first layer. In the case of asecond layer, by far a lower amount of material will be needed (~ 50 %).
Polishing is possible after 24 hours.

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Storage

Further information for storage:
Store in a dry and cool place. Protect against moisture. Store container in a well ventilated place.
Conditions for storage rooms and vessels:
Observe local/state/federal regulations.

The 'Best use before end' date of each batch is shown on the product label.

Storage beyond the date specified on the label does not necessarily mean that the product is no longer usable. In this case however, the properties required for the intended use must be checked for quality assurance reasons.

Safety notes

Advice for storage of incompatible materials:
Observe local/state/federal regulations.
Comprehensive instructions are given in the corresponding Material Safety Data Sheets. They are available on request from WACKER subsidiaries or may be printed via WACKER web site http://www.wacker.com.

Product data

Typical general characteristics	Inspection Method	Value
Appearance and color		clear
Flash point	ISO 2719	103 °C
Density at 20 °C, at 1013 hPa	DIN 51757	1,15 g/cm³
Viscosity, dynamic at 25 °C (shear rate = 5 - 400 1/S)	specific method	approx. 75 mPa.s

These figures are only intended as a guide and should not be used in preparing specifications.

For technical, quality, or product safety questions, please contact:

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