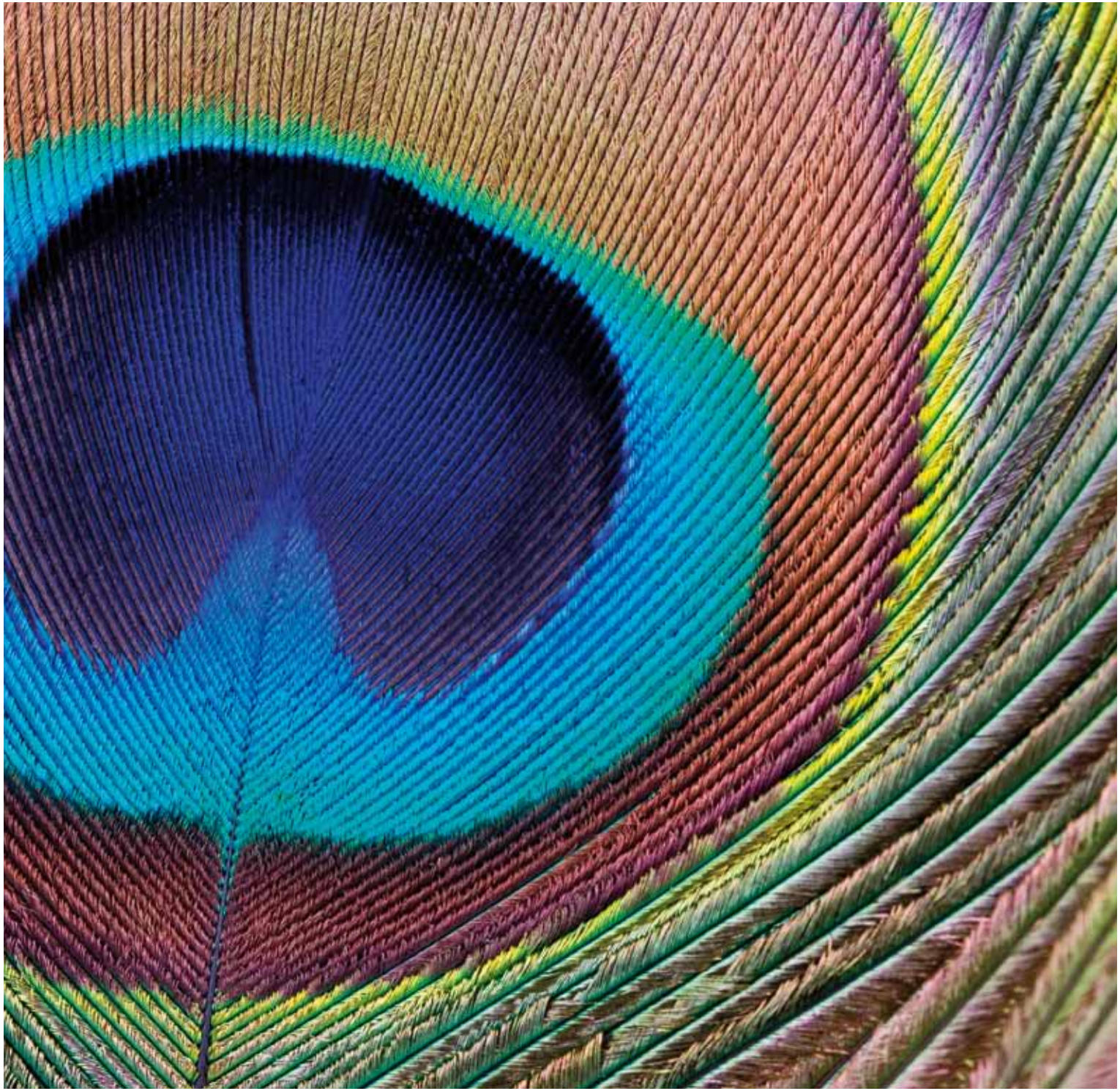
Resysta®
THE BETTER WOOD

SURFACE TREATMENT
OF RESYSTA

Version 2 / May 2013 / North America



Resysta®
THE BETTER WOOD

1. Basics

Resysta is a fiber-reinforced hybrid material which is 100% waterproof. Therefore, ingress of water cannot occur. Dissolving of the stain cannot happen and extensive sanding and restaining or resealing is not needful. Thanks to these properties, Resysta can be stained without flaking taking place.

Resysta FVG and Resysta RFS were especially adapted to the properties of Resysta. Only these products may be used for Resysta as they were specifically developed for Resysta regarding brushability and adherence.

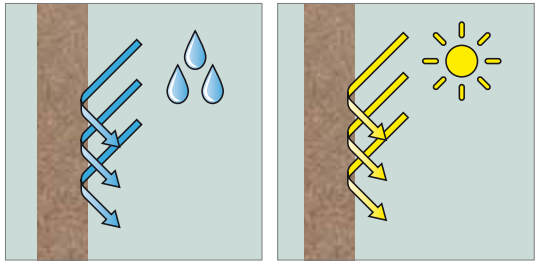
Reasons for Resysta surface treatment:
- color design
- protection against dirt
- protection against color-fading

FRONTAL AREA

Resysta does not feature capillary action. Therefore ingress of moisture at the edges cannot take place and a frontal area protection is not obligatory necessary.
Resysta may however be paint-coated for optical reasons.

Properties of Resysta untreated

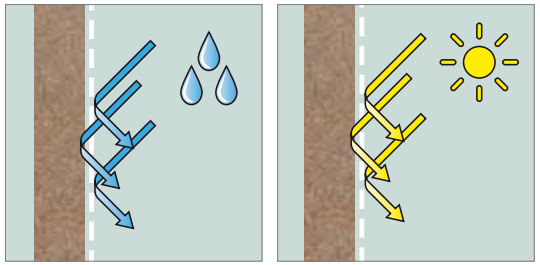
Due to the open structure of the surface, dirt can deposit more easily than on a sealed surface.
A slight color-fading of untreated Resysta may occur in the course of time.
However, penetration of water or dirt does not take place and Resysta does not gray.
Less maintenance effort has no adverse effect on the durability of the material.
The surface may be stained or sealed at a later stage.



Water (rain) and UV-rays
have a direct effect
on the Resysta surface.

Properties of Resysta with stain (FVG)

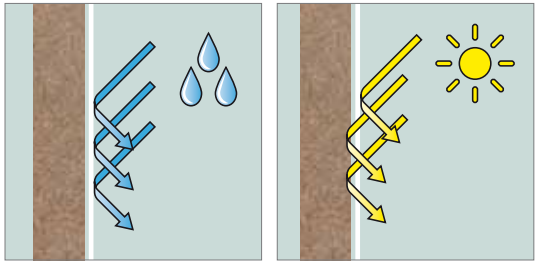
The surface is colorized with the transparent colored Resysta stains. Due to the open structure of the surface, dirt can deposit more easily than on a sealed surface.
A slight color-fading of Resysta may occur in the course of time. Staines with higher pigmentation feature less visible color change than stains with low pigment-content.



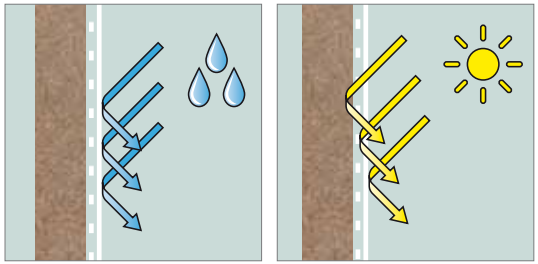
Water (rain) and UV-rays
partially affect
the Resysta surface.

Properties of Resysta with sealer (RFS)

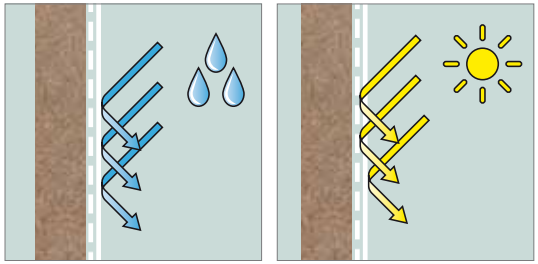
The sealer prevents water (rain), dirt and grease to affect Resysta.



Resysta untreated + sealant
Water and dirt are repelled.
UV-rays partially affect Resysta.
The color becomes more intense
in the course of time.



Resysta + glaze (low pigmentation) + sealant
Water and dirt are repelled. UV-rays partially affect Resysta.
The color-intensification is slightly less
in the course of time.



Resysta + glaze (higher pigmentation) + sealant
Water and dirt are repelled.
UV-rays have little or no affect Resysta.
Only slight color-intensification
in the course of time.

Note:
We recommend to use the sealer only in combination with the stain.

2. Product Range

STAIN FVG

Resysta stain was especially developed for coloring Resysta and is available in various color shades and unit sizes.

SEALER RFS

Resysta sealer protects the glaze and the surface respectively.

FLAT BRUSH

The Resysta flat brush is particularly suitable for efficient stain application.

Resysta Color Concept – FVG Glazes

Our color shades allow for quick and easy color-design of the Resysta surface and subsequent treatment, if necessary. The water-based colors can be processed absolutely odor-neutral, are quick-drying and can easily be freshened up any time.
For further details and information regarding Resysta surface treatment with protection stain and 2-K sealer please refer to www.resysta.de.

3. General Information

Standard woodworking tools can be used for the processing of the material.

SAWING: Resysta may be cut longitudinal and transversal with all customary saws.
MILLING: Any profiles can be milled easily by means of customary woodworking machines.
SANDING: Resysta should be sanded in longitudinal direction only. Depending on the required surface structure, we recommend the use of sand paper with graining between 24 and 60. Fine-grit sand paper should only be employed for the removal of dirt.
DRILLING: Drilling with customary standard wood drills.

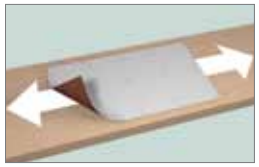
Bonding

Resysta International GmbH offers adhesives and bonding agents for the bonding of surface profiles with floor, wall and ceiling. Resysta may be glued with standard PU-adhesive or a suitable plastic adhesive.

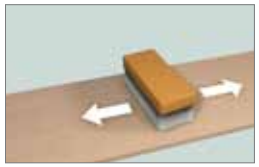
4. Pre-Treatment

4.2. Pre-Treatment of the material prior to color treatment

To ensure best color adhesion, Resysta should be prepared accordingly.



For the structure, Resysta profiles are generally pre-sanded with sand paper with 24 graining.
To remove light soiling and loose particles please use sand paper with 80-100 grit and gently sand manually.
For cutting edges, scratches or heavy soiling please use sand paper with 24-60 graining.



Loose particles and sanding dust may also be removed with a brush.

5. Resysta untreated

Cleaning: Dirt can easily be removed by means of a gentle jet of water (i.e. garden hose, high-pressure-cleaner with appropriate distance) or with a soft brush. Tenacious dirt (e.g. organic residues, fat) may also be removed with a stiff brush or by gentle sanding.
Care/Maintenance: Care/Maintenance is not needful. Resysta may be glazed and/or sealed at a later stage. Prior to this treatment the profiles have to be thoroughly cleaned and gently sanded.

6. Color-Stain FVG

6.1 Application of the stain

To obtain a uniform and optimal color result, the stain should be applied at consistent basic conditions. We therefore recommend applying the stain before installation on each profile individually. Application temperature approx. 40° - 80°F, relative air humidity approx. 50 – 60%.

Please do not apply the stain under direct exposure to sunlight or at high risk of rain. The stain should be applied rapidly and with a flat paint-brush.

Drilling holes, bolt fittings and cutting edges that arise after installation, should be stained subsequently. Scratches and damages can be refinished by applying the stain on the damaged surface with a cloth.

For detailed information please refer to the application instructions for the glaze.

6.2 Care

Care on a regular basis is not required.

6.3 Cleaning

Dirt can easily be removed by means of a gentle jet of water or with a soft brush. Tenacious dirt (e.g. organic residues, fat) may also be removed with a stiff brush or by gentle sanding.

6.4 Maintenance

Depending on the area of application (flooring, ceiling, cladding) the stain can wear to a greater or lesser extent in the course of time. If requested, the stain can be renewed at any time in diluted form (i.e. ratio: 3 parts water – 1 part stain).
Prior to this, the stained surface should be thoroughly cleaned (optionally gently sanded). Traces of usage may be stained partially.

6.5 Refinishing

Rub with a soft cloth in case of minor scratches or damages. Gently sand larger areas and reapply the stain with a paint-brush.

6.6 Removal

- Sand off the stain (sand paper: 100-120 graining).
- Optionally re-create the Resysta structure (sand paper: 24-60 grid).
- Apply the stain.

7. Sealer RFS

Application of the sealer Resysta RFS closes the surface and small joints. Ingress of moisture is prevented and the surface will be more hard-wearing. Thanks to the sealed structure, dirt particles do not adhere and are therefore easy to remove.

7.1 Application

The sealer consists of 2 components and should – after mixing – be applied promptly (with a flat paint-brush) within 30 minutes. The sealer should not be applied at direct exposure to sunlight.

Please refer to the processing instructions of the sealer for detailed information.

7.2 Care

Care on a regular basis is not required.

7.3 Cleaning

For cleaning just use water and some detergent (soapy suds). Tenacious dirt (e.g. organic residues, grease) may also be removed with a soft brush.

7.4 Maintenance

Maintenance is basically not required. Depending on the area of application (flooring, ceiling, cladding) the stain can wear to a greater or lesser extent in the course of time. To renew the sealer, the old layer has to be removed before sealing again.

7.5 Refinishing

In the case of mechanical damages (e.g. scratches) moisture will not penetrate Resysta. Flaking of the coating will not occur. To refinish the damaged areas, reseal the surface after cleaning and gentle sanding. To mend deep scratches the use of a color-providing stain is recommended. Gentle sanding and rubbing in the stain (e.g. with a cloth) is sufficient.

7.6 Removal

- Sand off the sealer thoroughly (sand paper with 100-120 graining).
- Optionally re-create the Resysta structure (sand paper with 24-60 grid).
- Reapply the sealer.

8. Further Information

Mildew spores, heavy soiling

Depending on the environment, organic residues may deposit on Resysta. This is the ideal medium for mildew spores contained in the ambient air which could cause staining. Depending on the degree of soiling, we recommend to thoroughly clean Resysta and remove organic matter (e.g. foliage, leaves). This procedure will not harm Resysta. Stains can be removed by gentle sanding or intensive brushing.

Thermal expansion

When using dark colors, the material heating and consequential thermal expansion is higher than with lighter color shades. The difference may be 10 – 15°.
This has to be considered at installation.

Instructions of use

Stain and sealer are subject to physical wearout. The useful life period depends on the individual use and application. Abrasion and mechanical strain may result in scratches and increased abrasion of the surface. Surfaces which are subject to strong mechanical strain can be protected over a longer period of time by repeated application of the sealaer.

9. Technical Data

Density	ASTM D2395:2002	approx.1.46 kg/m^3
Coefficient of Linear Thermal Expansion	ASTM D696	3.6x10(-5)mC
Water Absorption and Air Humidity Behaviour	ASTM D1037:2006a	none or very low water absorption (only surface wetting)
Weathering and UV Resistance	QUV Test	Resysta surfaces treated with stain and sealer show extremely high resistance
Skid Resistance	ASTM 2047	highest rating
Fire Behaviour (British Standard)	BS 476 Part 6 &7	B2, normal flammability (by adding flame retardants, a higher rating of B1 can be reached)
Fire Behaviour (US Standard)	ASTM E84	A Rating (flame propagation 25, smoke emission 450)
Fire Behaviour (British Standard)	BS 476 Part 6&7	Rating 1
Durability (Resistance to Wood-Destructive Fungi)	DINV ENV 12038:2002	the material has not been affected, highest durability – Class 1
Emission	DIN EB ISO 9001/14001	passed
Brinell Hardness (HB)	EN 1534	81,1 N/mm^2
Friction Coefficient μ untreated	EN 13893	0,46
Friction Coefficient μ with 2K	EN 13894	0,52
Screw Withdrawal Resistance	EN 320.2011-07	5777 N
Heat conductivity (λ)	EN 12664	0.199 W/(mK)
Water vapor permeability	DIN EN ISO 12572	μ=1300 -> sd 7.22m diffusion inhibiting
Bending Strength	ISO 178	46 N/mm^2
Bending Modulus	ISO 178	3850 N/mm^2
Tensile Strength	ISO 527	21,8 N/mm^2
Tensile Modulus	ISO 527	2340 N/mm^2
Shearing Strength	EN 392	16,8 N/mm^2
Resistance to Mould Fungal Decay	CEN/TS 15083-2	The material features almost no mass loss, highest durability classification 1 (very durable)

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The Future Formula Is Called Resysta

Raw Materials used:

approx. 60% rice husks + approx. 22% rock salt + approx. 18% mineral oil = Resysta