COLOR COAT SYSTEM
RBP AND RCL FOR RESYSTA PROFILES

Resysta material is a very stable and durable material, you can further improve its properties by using a specially formulated paint system thus increasing the water resistance and the resistance to solar radiation.
Such a paint system is the combination of the sealer RBP and the top coat RCL, which have been specially developed for use on Resysta material. It is a water-borne paint system with low VOC, which further extends the ecological advantages of Resysta material.

RBP (RESYSTA BASE PRIMER)
It is a transparent, low-viscosity, acrylic-based coating. Many tests have shown that using a suitable sealer on Resysta material has the following advantages: The main reason for the application is to provide an excellent water resistance. Hardly any coating can protect the Resysta material so well against moisture. Protection is very important, because with long-term effects the moisture can form white spots that do not disappear. Furthermore, it is a pure acrylic resin with very good lightfastness. It also contains a light stabilizer that protects the Resysta surface from harmful UV radiation. Improves the spread ability of the following paint and improves the optical homogeneity of the color coat.

RCL (RESYSTA COLOR LAYER)
It is a matte color coat based on an acrylic dispersion. It is the top layer of the structure with the following function: Decorative function - the colored layer. Scratch resistance. UV protection of the substrate with built-in light stabilizers and, depending on the color, also by UV absorbing pigments.

TECHNICAL DATA

	RBP	RCL
Density [g/cm³]	1,02	1,04
Weight Solids [%]	24,8	32,2
Volume Solids [%]	23,3	29,5
Flow Time DIN 53211 4 mm can [s]	13	70 - 120
VOC DIN ISO 11890 [g/l]	0,2	10,7
VOC ASTM D-39601 [g/l]	0,6	33,7
UV permeability * [%]	-	2
Taber Abraser** [mg]	-	10

* 120 µm wet layer on glass plate, TSD roughly 30 µm
** not pigmented, CS 17, 1 kg, 1000 x

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RESISTANCE OF THE PAINT SYSTEM

WATER RESISTANCE

Almost all water-borne 1-component paints tend to absorb moisture if they are exposed for a long time. This results in a white cloudiness that, depending on the paint structure, disappears with time after the part has dried, this may leave lighter stains on the contaminated area.

The structure RBP-1 and RCL-1 absorbs moisture but minimizes the further migration of that moisture into the Resysta material. After drying, the stains disappear again and leave only minimal traces. The Adhesion, and this is important, is not changed. The structure has good so-called wet adhesion. Many other coating systems tested with the same conditions showed less haze during exposure, but after drying the remaining stains were much more visible.

The optimal amount of stains is about 40-60 g / m^2 from the RBP and approx. 60-80 g / m^2 from the RCL.

LIGHTFASTNESS

As already mentioned, both coatings are based on very light-stable acrylic resins. Both also contain a light stabilizer, which absorbs harmful UV radiation and protects the surface from degradation.

The type of pigmentation plays a major role. Coatings pigmented with transparent iron oxides, e.g. the shade of walnut, which (gemeint die Iron oxides) serve as super absorbers of UV radiation but at the same time are not degraded by the light, provide an excellent protection.

Artificial laboratory weathering tests as well as natural outdoor exposure have shown that the degree of gloss deteriorates over time.

On the following pictures you can compare differently pigmented parts after the Arizona test. On the left is always the unexposed panel the sample not loaded, on the right the exposed Panel. The first picture shows the shade of walnut. On the following picture the unpigmented structure.

On the next picture you can see the effect of the built-in light stabilizer. The parts were tested in QUV-B 313 nm device. On the left is the zero sample without light stabilizer, on the right are the samples with 1%, 2% and 3% light stabilizer. It can also be seen that half of the part that was primed with the RBP had somewhat better durability.

Despite all the measures, the paint system will weather over time depending on the load. One must reckon with the loss of sheen and the change in color, depending on the load. The paint structure can be overpainted, and the same material can be used to renew the weathered surfaces.

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