

DUAL CURE PROCESS

New UV Coating Shines in Deep Black

The glossy black paint on pianos – commonly known as “piano finish” – is considered as the reference when it comes to obtaining a high-gloss finish with an intense depth of colour. However, producing such luxurious finishes involves great effort and they cannot be applied to complex geometries. Now, one company has succeeded in obtaining the surface properties of a piano finish with an easy-to-use paint formulation combined with the advantages of UV-curing coatings.

Providing a luxurious finish for a piano in all its perfection requires a large number of processes, involving painting and polishing manually in numerous working steps. Applying such a finish to complex geometries is practically impossible.

Peter-Lacke took the brilliant piano finish as a model for applying a high-gloss black finish to plastic surfaces. The result of this development is a fast-curing UV coating that can also be applied to three-dimensional surfaces. This is done using the UV Dual Cure process, which enables the surfaces to fulfil the highest demands with regard to mechanical wear and resistance to chemicals.

The new coating is based on a combination of PUR raw materials and UV-reactive components. The formulation includes a special resin that reacts to UV light on a very specific wavelength. The advantage of this application process is that the surface can be immediately exposed to use as soon as the curing



process is complete. This therefore eliminates the inconveniently long curing period of conventional polyurethane coatings.

The unrestricted application of the coating on three-dimensional surfaces also means that very good basic curing is achieved even at places that are not accessible to the UV light.

During development, particular attention was paid to further practical properties. For example, it eliminates the need to use an inert gas atmosphere when applying the high-gloss black UV coating, thus simplifying the production process. UV Dual Cure coatings can also

be polished without restrictions. This allows defects to be removed and significantly reduces the reject rate of the coated products.

Suitable for day/night design

A further advantage is that the coating can be laser-processed. This property is particularly important for the modern day/night design of

interior automotive components. In addition to cockpit elements and trim in the vehicle interior, the new coating is also suitable, for example, for infotainment components.

A UV coating system is required if all the advantages of the high-gloss coating system are to be exploited. —

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