

Stone Steinveredelung GmbH, 26160 Bad Zwischenahn, Germany

# New UV coatings with very high scratch and abrasion resistance for the concrete industry

Stone Steinveredelung GmbH headquartered in Germany is a leading supplier of modern coating systems for the concrete industry especially focusing on applications for terrace slabs, pavers and other concrete elements for outdoor use. Choosing high-end raw materials and introducing a new process, the R&D team of this company has now succeeded in substantially optimizing the characteristics of Stone 100% UV coatings to an even more advanced degree. UV coatings of the 3rd generation are now boasting much better scratch and abrasion resistances than ever before.

The new 3rd generation UV coatings of Stone Steinveredelung GmbH ensure a very high protection of concrete products even in the case of severely negative external influences and environmental stresses. The end products treated with these new UV coatings clearly distinguish themselves from other standard coated products available in the market today.

These products are particularly suitable for public places exposed to constant wear-and-tear, such as hotel facilities. But also in the case of private premises where a great deal of importance is placed on a constantly well kept outdoor appearance, customers will certainly welcome UV coated Stone products.

Stone has been investing for almost a decade in its research and development activities as well as a wide range of testing methods based upon standards defined by independent testing authorities with the objective of creating new UV coatings

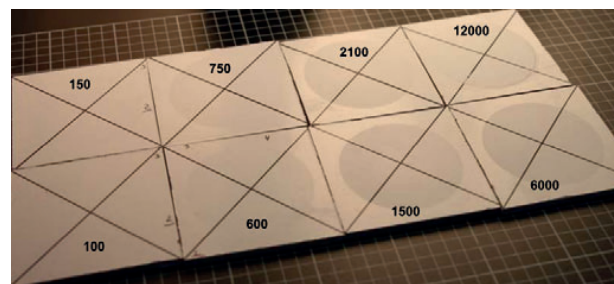


Fig. 1: Coating generations in direct comparison/surface abrasion acc. to DIN EN ISO 10545-7 at Keramik-Institut GmbH in Meißen: Determination of surface wear-and-tear acc. to DIN EN ISO 10545-7 (Abrasion appearance. Rotational figures given in illustration)

of permanent quality for mineral surfaces. It is only after successful completion of these tests that new products are introduced into the market. Such testing also includes the examination of surface wear-and-tear processes carried out at Keramik Institut Meißen (Fig. 1).

During the investigation, the following results were obtained for tests on glazed tiles and slabs: Classification into Class 4 "Higher stress exposure" of a total of 6 exposure classes (0 = Not recommended for concrete floor production; 5 = Very high stress exposure).

By modifying certain raw materials and applying new processing methods, UV coatings of the 3rd Stone generation are capable of boasting especially high anti scratch and abrasion

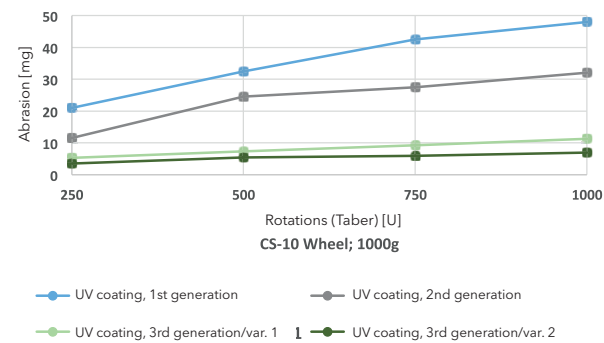


Fig. 2: Abrasion resistance of coated slabs - coating generations in direct comparison (CS-10 Wheel)

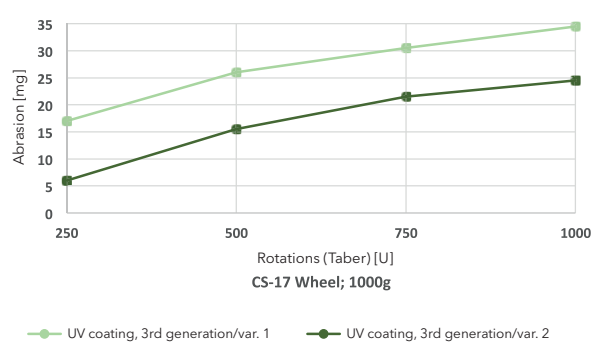


Fig. 3: Abrasion resistance of coated slabs - coating generations in direct comparison (CS-17 Wheel)



Fig. 4: UV coatings offer extremely high protection and intensify the coloration of the concrete.

characteristics. Developments in abrasion resistance are depicted in figure 2. Here, the coatings were compared with the help of the Taber Abrasion.

A conspicuous phenomenon is that there are almost no differences within the 3rd generation on the basis of this method. To arrive at further differentiations, further tests were performed by means of CS-17 (Fig. 3).

The characteristics of UV coatings known to date, such as resistance to chemical influences and exposure to dirt, but also high protection against weathering, are maintained in this way and even partially improved. This will guarantee a durability and longevity of the concrete product in question along with an appealing appearance, since the UV coatings used will additionally intensify the coloration of the concrete.

Stone exclusively offers these products for industrial use. Following the manufacture of the concrete products, the UV coatings are applied and cured by employing special coating and drying equipment.

## FURTHER INFORMATION

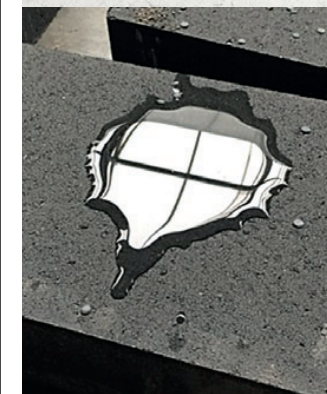


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