

Press release (and images from p. 3)

Concrete surfaces: New design options opened up by glass granules patented worldwide

Special plastic coating prevents contact between concrete and glass

Aitrach. The application of newly developed glass granules opens up an entirely new range of options for the design of concrete surfaces: Fabrino Color Coats, which have been patented worldwide, can easily be added to any building material with mineral binders without having to modify the concrete mix design. The key feature of these glass granules is a certain type of plastic coat. This coat prevents glass and concrete from coming into contact and reacting with each other. The glass granules have been jointly developed by Fabrino Produktionsgesellschaft mbH & Co. KG, headquartered in Aitrach in the State of Baden-Württemberg, and by Verano GmbH in Viersen.

A glittery golden floor for the sheikh? Scintillating silver external walls for the eccentric building owner? Coloured pavers for the veranda? The product offers an almost unlimited range of design options as Fabrino Color Coats are available in virtually any size and colour. These are glass granules the external surfaces of which are coated transparently or in a distinct colour in a multi-stage process. Over one million euros have been invested in their development. "Our aim was to develop glass granules that could be added to the concrete very easily whilst adhering to applicable standards and regulations," Hörmann comments.

The striking feature of these glass granules is their special plastic coat consisting of a mixture that is kept strictly confidential. This is what Klaus Hörmann tells us: "Pigments and special binders are applied to the granules at high temperatures, and subsequently hardened." At the end of the production process, the glass granules are enclosed by an enamel-like surface that is sanded in the final step. The coating prevents glass and concrete from coming into contact with each other. The sanded finish ensures the bond with the cement.

Coating resistant to acid and alkaline impact

Experts know that glass is difficult to integrate in concrete since the alkali-soluble silicic acid of the glass reacts with the alkali hydroxide of the concrete, forming an alkali-silica gel. This may result in concrete cracking or spalling on the surface – up to the complete destruction of the concrete. However, these phenomena will not occur when using Fabrino Color Coats with their patented plastic envelope. This so-called coating is resistant to both acid and alkaline impact. It effectively prevents alkali-silica reactions (ASR) in inorganic or organically bound mortars and concretes. This effect is guaranteed by Fabrino Produktionsgesellschaft on the basis of several building materials tests that have been carried out.

In the course of these tests, wetting and abrasion of the glass granules were investigated for concrete mixes with varying workabilities. The subsequent inspection under the microscope showed that the colour coat on the glass granules did not suffer any damage. "Following the processes of crushing, screening and washing, almost invisible cracks often run through the individual particles," Hörmann explains. Since these cracks may cause damage, they must be eliminated. At Fabrino, this is ensured by the application and burning-in of a reactive solution.

Many fields of application

Fabrino Color Coats can be combined with any aggregate or used as the only aggregate bound with cement, bitumen or reactive resins. Even phosphorescent glass that is being charged during the day to provide an attractive illumination at night has now become an option. Fabrino Color Coats can also be used in pointing mortars or as road and tunnel markings. "As a result, the concrete industry is, for the first time, able to compete in terms of colour spectrum and design, and to also occupy market segments previously dominated by the tile industry," Hörmann says.

(Internet: www.fabrino.eu)

More information available from:

Fabrino Produktionsgesellschaft mbH & Co. KG
Dr. Klaus Hörmann, Managing Director
Am Wirthsfeld 4
88319 Aitrach, Germany
Tel. +49 7565 94274-0
Fax +49 7565 94274-36
Email: info@fabrino.eu