

PLEXIGLAS® molding compounds provide durable high-class appearance and brilliant colors as a surface layer on PVC window profiles

Resistant to weathering, colorfast and easy to clean: surface upgrading with PLEXIGLAS® molding compound protects the new GEALAN-KUBUS® window and balcony door system against all kinds of weather, and enables modern building design.



Caption:

Gray is an on-trend color for windows and doors. But especially for colored profiles, it's very important for the material to be tough and resistant to UV light and weathering.

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Gone are the days when window profiles and balcony doors were only available in white. "Various shades of gray are currently on trend among architects and house builders," says Peter Czajkowski, head of architect consultancy at GEALAN Fenster-Systeme GmbH. "But especially for colored profiles, it's very important for the material to be tough and resistant to UV light and weathering. Otherwise, you quickly notice the effects of sunlight and humidity."

December 20, 2017

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To prevent dark gray from turning pale gray further down the line, the company located in Oberkotzau, Germany, protects its latest generation of profiles for windows and balcony doors (GEALAN-KUBUS®) with a surface layer of PLEXIGLAS®. The trademarked polymethyl methacrylate from Evonik gives the window a bright pop of color and is intrinsically resistant to UV light and weathering. “The window therefore keeps its high-class appearance in the long term,” Czajkowski explains. “That’s a key factor for house builders, who don’t want the new building or renovated window to look as if it’s in need of repair only a few years later.”

Modern building design

GEALAN-KUBUS® expands the existing portfolio of the plastic profile systems company that has been in business for almost 100 years. “In the past few years, we have noticed that plastic windows are often not up to the design requirements of modern architecture, say when it comes to large elements with more glass and less frame,” says Marc Freis, head of construction at GEALAN. In response, GEALAN developed a novel profile structure that gives the impression of being almost frameless on the inside of the room, but can be given a rectangular shape and individually colored on the outside. “GEALAN-KUBUS® gives architects and planners a new product they can use to create and build exclusive design-oriented features,” says Freis.

The profiles for windows and balcony doors are coextruded. The white PVC base, as the substrate material, is permanently fused with a colored layer of PLEXIGLAS® molding compound in just one production step. “The two materials merge into one, giving the profile a colored surface that can withstand any kind of weather with no problem,” explains Dr. Michel Sieffert, head of research & development at GEALAN. “That sets us apart from other conventional coloring processes such as colored coatings.” These have a tendency to flake off, crack or be permanently scratched.

No flaking or cracking

“That can’t happen with our acrycolor manufacturing process, which we have been using for all our colored profiles for almost 40 years,” says Dr. Sieffert. “By permanently fusing the colored layer with the substrate, giving it a hard surface, we prevent any flaking or cracking on a durable basis.” The PLEXIGLAS® layer is about 0.5mm thick, thicker than any coat of paint and scratch-resistant to boot. It is hard-wearing and chemical-resistant, both key factors given that windows are cleaned countless times with a variety of agents during their service life. “We took special care when developing our GEALAN-KUBUS® window system to ensure it is easy to clean,” Freis says. “Here too, upgrading with PLEXIGLAS® has convinced us for decades. Dirt has a hard job sticking to its perfectly smooth surface.”



Caption:

In the GEALAN-KUBUS® window and balcony door system, a surface layer of PLEXIGLAS® molding compound makes sure the high-quality appearance is set to last. © GEALAN

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