

Two questions, two answers:

- 1 Do you see developments that could lead to improved protection of the natural colour of wood?
- 2 What other technical trends do you see for wood coatings in the next years?

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1 In recent times, coatings imparting a “natural look” (although often such natural look is “corrected” or “enhanced” by the right stains) have become very popular, and have, consequently, improved constantly in quality. The authenticity of the “uncoated wood” look, its conservation over time, and the general protection properties of the coating have all improved thanks to the skill of paint formulators and the availability of new raw materials. New generations of resins yield coatings that do not turn the substrate colour either toward the grey or purplish – as it is still usual for latexes, depending on the perfection of the coalescence process – or toward the yellower and brighter – the traditional “*anfeurung*” still very prized.

“Natural look” coatings are, by their nature, extremely thin and can seemingly represent a poor long term defence for wood when its surface is subject to environmental attacks such as rain and sunlight. However, new ballasted or polymeric organic UV absorbers are making it possible to provide longer term colour fastness, aided by the nanomeric versions of some oxides, like cerium or zinc oxides, and wood-penetrating antioxidants.

2 Wood coatings are set to undergo some drastic technological changes in the near- to mid-term. Wood is the ideal renewable material, and wood-based products will replace plastic or even metals in many applications in the future. That will require the diffusion of both similarly renewable bio-based technologies, and of coatings guaranteeing better performance with no safety or environmental compromise.

One example of the latter type of new coatings is IVM Chemicals’ own BCA technology: just launched, it puts together the high protection performance of 2K coatings with the ease of use of 1K products, high drying speed

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Marcello Vitale
Innovative Research Technical Manager
IVM Chemicals
m.vitale@ivmchemicals.com

and strong regulatory and safety advantages thanks to the absence of isocyanates, formaldehyde or aromatic solvents. All made possible when great formulation skills met the opportunity of new materials and worked doggedly at overcoming their apparently impossible drawbacks.

On the other hand, bio-based coatings, and in general low LCA coatings, will get into general use and decrease in cost as more suppliers get into the actions and the materials themselves become more reliable. For example, in order to compensate for the inherent variability in the properties of bio-based – especially least purified, lower LCA – materials, IVM Chemicals, with financing from the EU LIFE Program as part of the LIFE-Biopaint Project, is building an advanced prototype paint production unit for 100% UV coatings. It will employ largely bio-based resins produced in the same vertically-integrated plant, not emit any VOCs, produce minimal waste and minimise any formulation variability. Prototype coatings are going to be available in the second half of 2020. **3**

Book tip

Wood Coatings

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