

Press Release



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Covestro supports switch to water-based polyurethane coatings for wood and furniture

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Fast hardener

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Quick drying and performance similar to solvent-based systems

When it comes to wood coatings, solvent-based polyurethane (PU) systems dominate the world market. Because the water-based PU coatings produced thus far dry at a slower rate, it is difficult for wood and furniture manufacturers to switch to these systems with a lower content of volatile organic compounds (VOC), since it takes longer for them to further process their goods.

However, [Covestro](#) has now overcome this obstacle to switching technologies: from March 19–21, the company will present [Bayhydur® quix 306-70](#) at the European Coatings Show 2019 in Nuremberg. This new hardener makes it possible for the first time to formulate water-based, two-component wood coatings of the highest quality that have drying properties similar to solvent-based systems, but cause less VOC emissions.

Drying up to 60 percent faster

“Water-based wood coatings that are based on the new hardener and selected polyol components achieve a sand dry after just 35 minutes, and therefore must no longer be protected from dust. In less than two hours, T4 drying time is achieved, meaning the film is fully dried,” says Dr. Eva Tejada, wood coatings expert in the Coatings, Adhesives, Specialties segment at Covestro. That means a reduction of the drying time by up to 60 percent over standard water-based PU systems.

The pot life is quite unaffected by this: depending on the formulation, the coating can be processed for more than 7 hours after mixing in the components. Eva Tejada will present a detailed properties profile of the new hardener at the [ECS](#)



Conference (on March 19, from 2:00 p.m.) as well as at a product presentation on March 20, from 12.10 p.m.

Good resistance to chemicals and UV radiation

Water-based wood coatings based on Bayhydur[®] quix 306-70 have similar chemical-resistance properties to solvent-based systems in the same quality category. Extensive comparison tests, in which coffee, red wine, mustard, ethanol or water came into contact with the coatings, are proof of this. In terms of appearance, no compromises must be made either: water-based clear coatings with the new hardener shine just as much as mainstream solvent-based PU wood coatings.

From a chemical perspective, the new hardener is an anionic modified isocyanate, comprising both an aromatic and an aliphatic part. Despite the aromatic part, white-pigmented wood coatings based on Bayhydur[®] quix 306-70 do not turn yellow faster than standard solvent-based systems when exposed to UV light or heat.

Overall, Bayhydur[®] quix 306-70 enables coatings manufacturers to formulate dual-component wood coatings with a VOC content below 100 g per liter that are just as effective and efficient as comparable solvent-based systems.

About Covestro:

With 2018 sales of EUR 14.6 billion, Covestro is among the world's largest polymer companies. Business activities are focused on the manufacture of high-tech polymer materials and the development of innovative solutions for products used in many areas of daily life. The main segments served are the automotive, construction, wood processing and furniture, and electrical and electronics industries. Other sectors include sports and leisure, cosmetics, health and the chemical industry itself. Covestro has 30 production sites worldwide and employs approximately 16,800 people (calculated as full-time equivalents) at the end of 2018.

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