



**Bayhydrol® UV 2901**

## Bayhydrol® UV 2901

Improved performance and cost efficiency  
for wood coatings



## High-performance, UV-curable dispersions

Waterborne (WB) and UV systems are being established as fair alternatives to solventborne systems as they offer a significant reduction in volatile organic compounds (VOCs), from <150 g/l to 0 g/l.

### For use as a coating agent or booster

Manufacturers of wood and furniture coatings increasingly use waterborne systems as a safer, more sustainable alternative to solventborne systems. Waterborne coatings enable solutions that are low in VOCs, easy to down-gloss, better labelling, and can be applied by spraying thanks to lower viscosity.

Conventional waterborne systems can be transformed into UV-curable solutions by blending with highly functional waterborne UV resins, improving both performance and productivity. However, such solutions have so far been costlier than conventional waterborne or solventborne alternatives. As a result, coating manufacturers haven't always had much flexibility in the blends and uses of these resins.

### Bayhydrol® UV 2901 at a glance

	Bayhydrol® UV 2901
Chemical base	Urethane acrylate dispersion
Solid content	50 %
Ph	7.7
Viscosity	400 mPa·s
Double-bond density	>8 mol/kg resin
Particle size	ca. 100 nm

### Bayhydrol® UV 2901:

#### Waterborne UV curing that balances cost and performance

**Bayhydrol® UV 2901** provides a solution, enabling more flexibility in coating formulations thanks to a better balance of chemical resistance, productivity, and price. At the same time, it delivers improved performance thanks to faster curing and water release and higher reactivity.

**Bayhydrol® UV 2901** gives manufacturers the freedom to formulate coatings according to their needs, with the desired balance of cost and performance. In particular, its high double-bond density provides outstanding performance compared to other UV-curable resins. It enables excellent improvements to chemical, blocking, and scratch resistance, as well as hardness. You can enjoy these benefits by blending it with standard 1K air drying systems, in boosters to existing UV-curable, in dual-cure systems, or as a standalone coating agent.

### Key benefits:

- Cost-performance balance
- Usable as a standalone binder, blending booster, and in a dual-cure system
- Good compatibility with acrylic dispersions
- Improves hardness and resistance to chemicals, blocking, and scratches
- Increased productivity; drying step is shorter due to the fast water release

Test liquid	Test period	Rating
<b>Chemical resistance according IKEA Class R2</b>		
Water	24h	5
Ethanol, 48%	1h	5
Coffee	1h	5
Paraffin oil	24h	5
<b>Chemical resistance according IKEA Class R0</b>		
Water	24h	5
Ethanol, 48%	6h	5
Coffee	6h	5
Paraffin oil	24h	5
<b>Chemical resistance according DIN68861-Class 1B</b>		
Mustard	6h	5
Red wine	6h	5

*Chemical resistance of a white pigmented matt (14G at 60°) coating based on **Bayhydrol® UV 2901**. Covestro internal testing according to DIN 12720, as performed on applied beech veneer. (5: best; no detectable change). Drying for 10 minutes at 50°C and curing under Ga/Hg lamps at 80W/cm² (total energy approx. 1,950mJ/cm²)*



Covestro Deutschland AG  
Kaiser-Wilhelm-Allee 60  
51373 Leverkusen  
Germany

[solutions.covestro.com](https://solutions.covestro.com)  
[info@covestro.com](mailto:info@covestro.com)

The manner in which you use our products, technical assistance and information (whether verbal, written or by way of production evaluations), including any suggested formulations and recommendations, are beyond our control. Therefore, it is imperative that you test our products to determine suitability for your processing and intended uses. Your analysis must at least include testing to determine suitability from a technical, health, safety, and environmental and regulatory standpoint. Such testing has not necessarily been done by Covestro, and Covestro has not obtained any approvals or licenses for a particular use or application of the product, unless explicitly stated otherwise. [EMEA only: If the intended use of the product is for the manufacture of a pharmaceutical/ medicinal product, medical device<sup>1</sup> or of pre-cursor products for medical devices or for other specifically regulated applications which leads or may lead to a regulatory obligation of Covestro, Covestro must explicitly agree to such application before the sale]. Any samples provided by Covestro are for testing purposes only and not for commercial use. Unless we otherwise agree in writing, all products are sold strictly pursuant to the terms of our standard conditions of sale which are available upon request. All information, including technical assistance is given without warranty or guarantee and is subject to change without notice. It is expressly understood and agreed by you that you assume and hereby expressly release and indemnify us and hold us harmless from all liability, in tort, contract or otherwise, incurred in connection with the use of our products, technical assistance, and information. Any statement or recommendation not contained herein is unauthorized and shall not bind us. Nothing herein shall be construed as a recommendation to use any product in conflict with any claim of any patent relative to any material or its use. No license is implied or in fact granted under the claims of any patent. These values are typical values only. Unless explicitly agreed in written form, they do not constitute a binding material specification or warranted values.

<sup>1</sup>Please see the "Guidance on Use of Covestro Products in a Medical Application" document.

Edition: January 2025