

Bayhydrol[®] UH 2592

Characterization

Polyester-Polyurethane dispersion which dries by oxidation.
As a binder in the formulation of aqueous air- and forced-drying, high-gloss coatings and primers with very good anti-corrosion properties. Mainly used for general industrial finishes.

Form supplied	Approx. 45% in water, neutralized with ethyldiisopropylamine (EDIPA), ratio approx. 53.5 : 1.5
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Characteristic data*

Property	Value	Unit of measurement	Method
Viscosity at 23 °C, D = approx. 40 s ⁻¹	≤ 600	mPa·s	DIN EN ISO 3219/A.3
Non-volatile content (1 g/1 h/125 °C)	43 - 47	%	DIN EN ISO 3251
pH supply form	6.0 - 7.5		DIN ISO 976

*These values are provisional. Binding supply specifications will not be available until the final product data sheet is published.

Other data**

Property	Value	Unit of measurement	Method
Mean particle size	approx. 125	nm	photon correlation spectroscopy
Appearance of supply form	milky, cloudy		
Density at 20 °C	approx. 1.0	g/ml	DIN EN ISO 2811
OH content (calculated on solid resin)	approx. 2.1	%	
Acid value	approx. 12	mg KOH/g	DIN EN ISO 2114
Renewable content (% solid) ¹⁾	approx. 28	%	calculated value

¹⁾ % renewable carbon content, calculated minimum value confirmed by ¹⁴C measurement according to ASTM D 6866 : 2008

**These values provide general information.

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Compatibility

Combination with other aqueous binders is possible but should be tested in every single case.

All standard inert and alkaline pigments can be used to colour formulations based on Bayhydrol[®] UH 2592.

Properties / Applications

Coatings based on this resin show a quick drying and after drying a quite high hardness. After curing over night a very good water-resistance is achievable. High-gloss coatings, however, need a certain amount of suitable co-solvents and additional amine in the formulation. Primers based on Bayhydrol[®] UH 2592 perform with an excellent corrosion resistance.

Bayhydrol[®] UH 2592 can be used as universal resin for high-gloss top coats, effect coats and - due to its excellent anti-corrosion properties – as raw material for primers and single coats.

Bayhydrol[®] UH 2592 shows a very good shear-stability and is therefore recommendable for dip applications, too.

Handling

Bayhydrol[®] UH 2592 in its supply form is neutralized to approx. 60% with ethyldiisopropylamine. To achieve a better pigment wetting additional amounts of amine (ethyldiisopropylamine, triethylamine or - in case of forced drying – dimethylethanolamine) are recommended. The additional amine should be added to the mill base and should target a neutralization degree of 80 – 100%, depending on the pigmentation.

Addition of amine causes a significant increase of viscosity.

Please take additional advice for handling and formulation from the starting point formulations.

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Siccatives

All established water-mixable driers may be used.

Storage

- Storage in original sealed Covestro containers.

- Recommended storage temperature: 5 - 23 °C.

- Protect from frost.

General information: The product freezes at temperatures below 0 °C and may be damaged. It must therefore be stored frost-free.

Storage time

Covestro represents that, for a period of six months following the day of shipment as stated in the respective transport documents, the product will meet the specifications or values set forth in section "specifications or characteristic data" above, what ever is applicable, provided that the product is stored in full compliance with the storage conditions set forth in and referenced under section "storage" above and is otherwise handled appropriately.

The lapse of the six months period does not necessarily mean that the product no longer meets specifications or the set values. However, prior to using said product, Covestro recommends to test such a product if it still meets the specifications or the set values. Covestro does not make any representation regarding the product after the lapse of the six months period and Covestro shall not be responsible or liable in any way for the product failing to meet specifications or the set values after the lapse of the six months period.

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Labeling and statutory requirements This product data sheet is only valid in conjunction with the latest edition of the corresponding Safety Data Sheet. Any updating of safety-relevant information – in accordance with statutory requirements – will only be reflected in the Safety Data Sheet, copies of which will be revised and distributed. Information relating to the current classification and labeling, applications and processing methods and further data relevant to safety can be found in the currently **valid Safety Data Sheet**.

Important

This is a Trial Product of which we do not yet have extensive experience. No guarantee can therefore be given regarding the behaviour of the product during processing or use.

The manner in which you use and the purpose to which you put and utilize 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, technical assistance, information and recommendations to determine to your own satisfaction whether our products, technical assistance and information are suitable for your intended uses and applications. This application-specific analysis must at least include testing to determine suitability from a technical as well as health, safety, and environmental standpoint. Such testing has not necessarily been done by Covestro. 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 and technical assistance is given without warranty or guarantee and is subject to change without notice. It is expressly understood and agreed that you assume and hereby expressly release us 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.

This product is not designated for the manufacture of a medical device or of intermediate products for medical devices¹⁾. [This product is also not designated for other specifically regulated applications (e.g. including cosmetics, plant protection, fertilisers, plant strengtheners, food processing, food contact and others). If the intended use of the product is for the manufacture of a medical device or of intermediate products for medical devices or for other specifically regulated applications Covestro must be contacted in advance to provide its agreement to sell such product for such purpose.] Nonetheless, any determination as to whether a product is appropriate for use in a medical device or intermediate products for medical devices, for Food Contact products or cosmetic applications must be made solely by the purchaser of the product without relying upon any representations by Covestro.

1) Please see the "Guidance on Use of Covestro Products in a Medical Application" document.

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