

# Bayhydrol® UH 340/1

## Characterization

Aliphatic anionic polyurethane dispersion.

As a binder in the formulation of highly flexible water-thinnable coatings for wood, metal, plastics and mineral substrates. Also as a combination binder to improve the elasticity and flexibility of water-thinnable coatings.

## Form supplied

approx. 40 % in water

## Specification

Property	Value	Unit of measurement	Method
Viscosity at 23°C spindle L2/30 rpm	< 500	mPa.s	M092-ISO 2555
Non-volatile content (1 g/1 h 125 °C)	39 - 41	%	DIN EN ISO 3251
pH	6 - 7		DIN ISO 976
Mean particle size	120 - 220	nm	photon correlation spectroscopy

## Other data\*

Property	Value	Unit of measurement	Method
Acid value	approx. 1.5	mg KOH/g	DIN EN ISO 2114
Minimum film forming temperature (MFT)	< 2	°C	DIN ISO 2115
Density at 20 °C	approx. 1.1	g/ml	DIN EN ISO 2811-2
Appearance visual	milky, cloudy		

\*These values provide general information and are not part of the product specification.



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<b>Solubility / thinnability</b>	with water		
<b>Compatibility</b>	Bayhydrol® UH 340/1 is compatible with many acrylic, styrene-acrylate and polyurethane dispersions. Because of the large number of potential combinations, compatibility testing should always be carried out.		
<b>Properties / Applications</b>	<p>Bayhydrol® UH 340/1 can be used as the sole binder in the formulation of flexible lightfast coatings. The product is also suitable for combination with other water-thinnable binders. The pH of ready-to-use coatings should be between 7 and 8. Substances such as ammonia can be used to adjust the pH. Yellowing has sometimes been observed on maple. A test area should be coated before application on large surfaces.</p> <p><b>Mechanical properties:</b></p> <p>The following elongation and tensile stress values (average) have been measured in transparent and pigmented coatings (20 % pvc; Tronox R-KB-4<sup>1</sup>):</p>		
	<b>Elongation at break</b>	<b>transparent</b>	<b>pigmented</b>
	+ 20 °C	500 %	400 %
	0 °C	400 %	300 %
	- 20 °C	300 %	250 %
	<b>Tensile stress at break</b>		
	+ 20 °C	4 N/mm <sup>2</sup>	3 N/mm <sup>2</sup>
	0 °C	12 N/mm <sup>2</sup>	12 N/mm <sup>2</sup>
	- 20 °C	18 N/mm <sup>2</sup>	18 N/mm <sup>2</sup>
	<b>Microhardness</b>	60 Shore A	70 Shore A

<sup>1</sup> Kerr-McGee Pigments GmbH & Co KG, Krefeld, Germany



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## Storage

- Storage in original sealed Covestro containers.
- Recommended storage temperature: 5 - 30 °C.
- Protect from frost, heat and foreign material.

General information: An increase in viscosity may occur during storage. If the containers are not sealed properly, the evaporation of water will result in the formation of a film which cannot be redispersed. The product is sensitive to frost. Freezing will damage the product irreversibly. Prolonged storage at higher temperatures may result in a decrease of viscosity and/or an increase of average particle size, possibly resulting in sedimentation or coagulation. Contamination with certain bacteria, fungi or algae may render the product unusable.

## 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**.

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 devices<sup>1</sup>). [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.

Edition: January, 2018

Editor: Coatings, Adhesives & Specialties  
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Edition 2022-01-05

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Places edition dated 2015-09-01

