



Non-ionic polyurethane-based thickener for waterborne coating systems, tin-free

Description

Borchi® Gel THIX 921 is a liquid polyurethane-based thickener that is free of alkylphenol ethoxylate (APEO), and tin compounds. The product mostly produces depending on the type of binder used and the other components of the system a pronounced shear-thinning flow behavior.

Borchi® Gel THIX 921 is well suited as thickening agent for all waterborne painting systems, especially for industrial and decorative coatings, adhesives and knifing fillers.

Characteristic data

Appearance:	high-viscous, yellowish liquid	
Active substance, %:	approx. 25	
Density (23 °C), g/cm ³ :	1.06 – 1.10	DIN 53217 - 1991
Non-volatile content, %:	30 - 34	ISO 3251 - 1974 (2g, 3h, 105 °C)
Viscosity (23 °C), mPa·s:	≤ 15,000	ISO 3219 (A) - 1994
Flash point, °C:	> 100 (typical)	ISO 3679 - 1991
Solvent:	water	
Solubility in water:	pre-dilutable in PG* / H ₂ O (1:1) from 1:1 to 1:10 pre-dilutable in BG* / H ₂ O (1:1) from 1:1 to 1:10 pre-dilutable in BDG* / H ₂ O (1:1) from 1:1 to 1:10 *PG = propylene glycol (1,2 propandiol) *BG = butyl glycol (2-butoxyethanol) *BDG = butyl diglycol (2-(2-butoxyethoxyethanol))	

Properties

Borchi® Gel THIX 921 improves the rheological properties of waterborne coating systems, in particular at lower shear (< 1,000 s⁻¹). Thus contributes to obtain enhanced storage stability.

Borchi® Gel THIX 921 develops a strong pseudoplastic, partly thixotropic flow behavior and can be used both for cataphoretic painting and spray applications as well as – combined with a high-shear thickener as *Borchi® Gel 0434*, *Borchi® Gel 0435* and *Borchi® Gel 0626* – for paint application by brush and roller.

After destruction of the thixotropic structure by shearing, the initial viscosity rebuilds at a slower rate than it was broken down so that eliminates brush marks, but recovers fast enough to prevent sagging of the coating.

Borchi® Gel THIX 921 can be used without any problems in combination with other thickeners e.g. cellulosics and acrylics.

Borchi® Gel THIX 921 ameliorates levelling and application properties of the paint formulations. In order to evaluate the thickening effect, it is recommended to let to rest 16 hours after adding the thickener.



Use and Dosage

Borchi® Gel THIX 921 is easy to use and can be added in any stage of the formulation. We recommend the incorporation after dispersing the pigments and fillers, prior to letting down. In critical systems or under low-shear mixing conditions could a pre-dilution in water or a mixture of water / propylenglycol supplementary induce a homogeneous incorporation.

Depending on the type and amount of binder used as well as of the fillers and pigments in the formulation, the addition is approx. 0.1 – 2.0 % by wt. thickener in its supply form, calculated on the paint formulation. For glossy paints preparation are generally higher amounts needed. The exact amount required for the respective system should be determined in pre-trials.

Storage

Protect from the effects of weather and store at temperatures between 5 and 30 °C.
Once opened, containers should be resealed immediately each time product is removed.

Before using the product should be stirred well. After prolonged storage at temperatures below 0 °C, it should be homogenized at 50 °C.

Safety

The product is not subject to the German Regulation on hazardous material and no labelling is required in accordance with the EEC directives. It is not dangerous cargo.

Please refer to our safety data sheet for information relating to product safety.

Updated: 09.11.2009

OMG Borchers GmbH

Berghausener Str. 100 / 40764 Langenfeld / Telephone: +49 (0) 2173 – 39 26 666
Fax: +49 (0) 2173 – 39 26 999 / Internet: www.borchers.com / E-Mail: info.borchers@eu.omgi.com

Our product information is given in good faith but without warranty. This also applies where proprietary rights of third parties are involved. This information does not release the customer from the obligation to test our products as to their suitability for the intended processes and uses. The application, use and

processing of our products and the products manufactured by the customer on the basis of our technical advice are beyond our control and, therefore, entirely the customer's own responsibility. Our products are sold in accordance with the current version of our General Conditions of Sale and Delivery.