Borchi® Gel WN 50 S

Thickener for emulsion paints and aqueous paint systems
glycol ether free, VOC-free according to the European Directives 1999/13/EC and 2004/42/EG

Description

Borchi® Gel WN 50 S is a polyurethane-based, non-ionic liquid thickener. It also acts as a flow promoter in emulsion paints and stabilizes pigmented, aqueous paints.

Co-solvent free

Characteristic data

Appearance:	colorless to slight yellowish, clear to slight cloudy liquid	
Free of swelling agents:	yes	Borchers test method 100-06: (spatula run-off test)
Non-volatile content, %:	47 – 53	DIN EN ISO 3251 (1g, 1h, 125 °C)
Viscosity (23 °C), mPa·s:	< 9,000 mPa·s	DIN EN ISO 3219 (A.3 rotation)
Flash point, °C:	> 100 (typical)	

Properties

The particular molecular structure of **Borchi® Gel WN 50 S** allows its adsorption at the surface of dispersed particles formed as a result of emulsion polymerization. It is characterised by good efficiency. It improves the rheological properties of emulsion paints, making the end-products easier to apply with a roller or a brush despite a considerable increase in viscosity. The product can be combined with other thickeners to achieve special effects.

Since it improves the flow properties of emulsion paints, **Borchi® Gel WN 50 S** has proved particularly useful for thickening acrylic gloss paints and anti-corrosion coatings. At the recommended addition rate, **Borchi® Gel WN 50 S** does not adversely affect the water resistance of the films.

Borchi® Gel WN 50 S is manufactured using aliphatic isocyanates; it has thus no negative influence on yellowing and chalking of coating film.

Applications

On the basis of our observations, **Borchi® Gel WN 50 S** is more effective in finely dispersed than in coarsely dispersed emulsions.

Suitable emulsion systems include pure acrylic, styrene-acrylic and styrene-butadiene. **Borchi® Gel WN 50 S** is also used in water-emulsifiable 2-component epoxy resin systems and other water-emulsifiable air- and oven-drying binders.

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Use and Dosage

The recommended dosage is 0.1 – 2.0 % thickener, relative to the total formulation. Because of its low intrinsic viscosity, **Borchi® Gel WN 50 S** can also be added after mixing without pre-dilution to adjust viscosity.

Larger quantities are generally needed for production of gloss paints. We recommend **Borchi® Gel WN 50 S** to be added directly to the mill base.

The thickening action of **Borchi® Gel WN 50 S** can be reduced using polar, water-soluble, film-forming agents, e.g. alcohols and glycols. Butyl diglycol acetate and Texanol®, on the other hand, bring about an increase in viscosity.

Since some formulations contain alcohol, it is advisable to test their effect on the viscosity of emulsion paints beforehand. In the case of gloss and silk-finish gloss paints, use of *Borchi® Gen DFN* or *Borchi® Gen SN 95* as the dispersing agent is recommended to achieve good stability and prevent sedimentation and flocculation.

Storage

Protect from the effects of weathering and store at temperatures between 5 and 30 °C.
Once opened, containers should be resealed immediately after each removal of the product.

Safety

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

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