

# Waterborne Wood Stain

based on a linseed oil emulsion (with Borch® Gel A LA) and a self-crosslinking acrylic dispersion

with Borch® OXY-Coat 1310  
High-Performance Catalyst

Part 1: Alberdingk OP 100 Emulsion					
Material	Function	Control Formulation*	Borch® Gel A LA Formulation**	Instruction	Supplier
Alberdingk OP 100	Resin	36.40	36.40	Fully incorporate each ingredient before adding the next material	Alberdingk Boley
Boltorn W 3000	Emulsifier	3.60	3.60		Perstorp
Deionized Water	Water	60.00	58.00		Milliken
<b>Borch® Gel A LA</b>	Stabilizer	0.00	2.00		
<b>Total</b>		<b>100.00</b>	<b>100.00</b>		

## Better Storage Stability

of the Alberdingk OP 100 emulsion after 2 weeks oven, 40°C

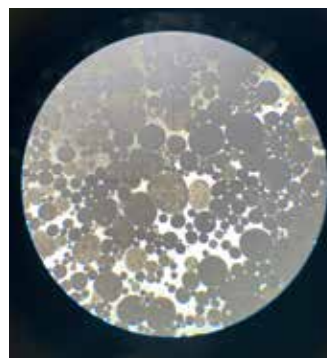


Control

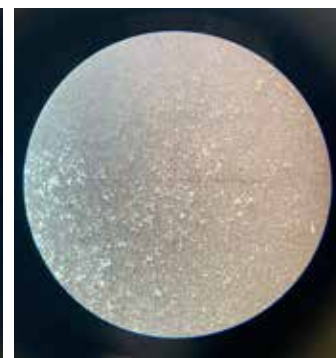


**Borch® Gel A LA**

## Smaller Particle Distribution

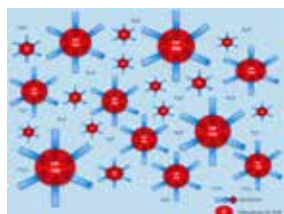


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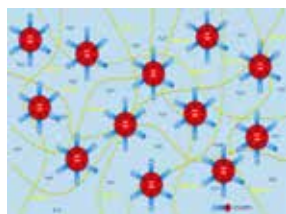


**Borch® Gel A LA**

Particle size distribution, microscopic magnification: 40x



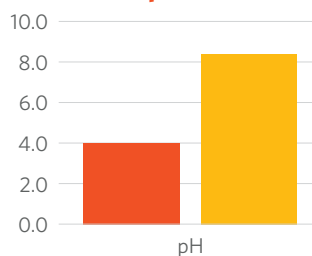
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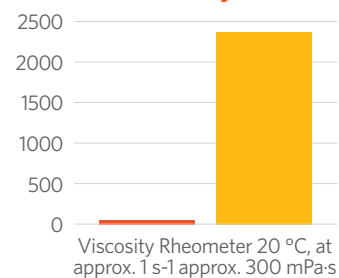
**Borch® Gel A LA**

A LA includes stabilization agent – yellow lines, red bubbles are resin – OP 100, blue lines are emulsifier (Boltorn W 3000)

## pH



## Viscosity



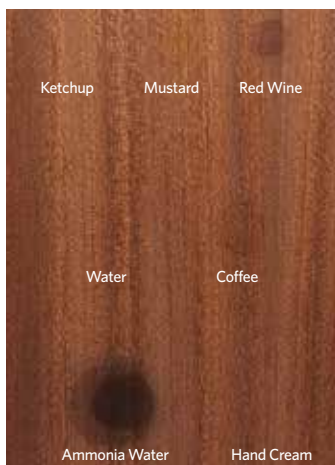
■ Control ■ 2% Borch® Gel A LA

### Part 2: Waterborne Wood Stain Formulation

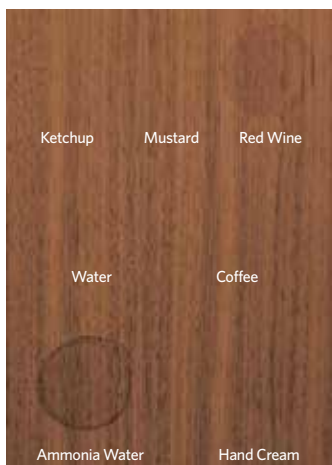
Material	Control Formulation	Borchi® OXY-Coat 1310	Instruction	Supplier
Alberdingk OP 100 emulsion	10.10*	10.10**	Fully incorporate each ingredient before adding the next material	Preparation Formulation 1
Alberdingk AC 2736 (acrylic resin)	22.50	22.50		Alberdingk Boley
Accelerated aqua manganese dryer	0.05	0.00		
<b>Borchi® OXY-Coat 1310</b>	0.00	0.10		Milliken
Silicone-containing defoamer	0.80	0.00		
Tri-Iso Butylphosphate (TIBP) silicone-free defoamer	0.00	0.60		Lanxess
Competitor substrate wetting additive	0.20	0.00		
<b>Borchi® Gol 1570 - wetting agent</b>	0.00	0.10		Milliken
<b>Borchi® Gol LA 232 - slip agent</b>	0.00	0.30		Milliken
Dowanol DPnB - solvent	3.00	3.00		Dow
Mirecide TF / 600W - biocide	0.40	0.40		Lamirsa
Polyurethane-based associative thickener	0.50	0.00		
Liquid modified urea rheology additive	0.50	0.00		
<b>Borchi® Gel THIX 921 - thickener</b>	0.00	1.00		Milliken
Deionized Water	61.95	61.90		
<b>Total</b>	<b>100.00</b>	<b>100.00</b>		

### Chemical Resistance

#### After 2 hours on Walnut

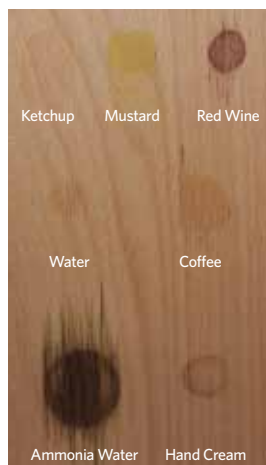


Control

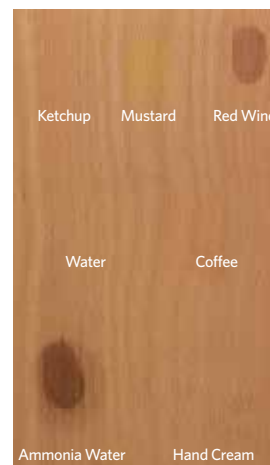


**Borchi® OXY-Coat 1310**

#### After 2 hours on Beech



Control



**Borchi® OXY-Coat 1310**

Order your sample at:  
[www.borchers.com/contact](http://www.borchers.com/contact)

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