

Waterborne Polyurethane Formulation for Interior High Gloss Topcoats

with Borchi® Performance Additives

Enabling high performance properties in wood-flooring and cabinetry coatings

- Low VOC
- NMP Free
- High Hardness
- High Gloss
- Robust Chemical Resistance
- Improved Solvent Rub
- Excellent Abrasion Resistance



Interior Topcoat Formulation for Wood Flooring and Cabinetry

Material	Function	Supplier	Formulation
UROTUF® L63-W-38	Resin	Polynt-Reichhold	82.71
Ethyl Carbitol	Coalescent	Sigma-Aldrich	8.07
Mix Three Materials Below Before Adding			
Borchi® Gel 0625	Rheology Modifier	Milliken	0.22
Ethyl Carbitol	Coalescent	Sigma-Aldrich	0.33
Water	Solvent	N/A	0.33
Borchi® Gol LA 200	Flow/Leveling/Defoamer	Milliken	0.09
Borchi® Gol LA 50	Substrate Wetting	Milliken	0.12
Surfynol 104E	Surfactant	Evonik	0.05
Water	Solvent	N/A	8.08
Total			100.00

Borchi® Performance Additives

- **Borchi® Gel 0625:** VOC-free and APEO-free medium shear range HEUR thickener
- **Borchi® Gol LA 200:** VOC-free, 100% active air release agent with flow and leveling properties
- **Borchi® Gol LA 50:** Substrate wetting additive with flow and leveling properties

Great Overall Solvent Rub Performance

200 Solvent Double Rubs

MEK



Xylene



IPA

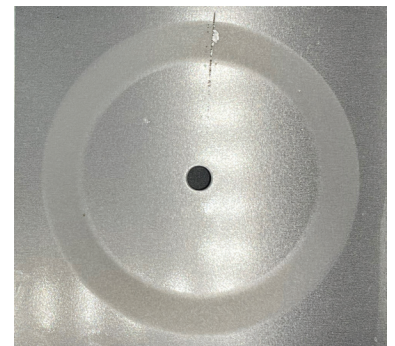


Ethanol



150um wire bar, B1000 panels, conditioned 7 days at 25°C, 50%RH
Improved performance compared to market standard formulations

Excellent Abrasion Resistance



Taber, CS-17 wheel, 1 kg load, 1000 cycles

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Film Performance

Dry Time, hrs:min ¹		Film Color ²	
Set to Touch	0:13	L*	92.86
Tack Free	0:20	a*	-0.59
Through Dry	0:40	b*	4.73
Gloss ¹		König Hardness ¹	146.5
60°	84	Taber Abrasion, mg loss ³	16.1
20°	94		

¹ 3 mil bird bar over glass

² 3 mil bird bar over leneta chart

³ Taber, CS 17 wheel 1 kg load, 1000 cycles

Chemical Resistance

10% Acetic Acid	2	Lipstick	5
10% Ammonia	5	Mustard	3
Parson's Ammonia	5	Nail Polish Remover	2
Ball Point Ink	5	Olive Oil	5
Black Marker	1	Shoe Polish	5
Bug Spray	1	10% Sodium Hydroxide	5
Cleaner 409	5	1% Spic and Span	5
Coffee	5	10% Sulfuric Acid	5
Dye	3	Sunblock, SPF-50	3
50% Ethanol	1	Tea	5
Fantastic	5	Vinegar	3
Iodine	2	Water	5
Ketchup	5	Windex	5

ASTM D1308, 4-hour exposure, covered rating 0-5 no effect



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