

Switch to TMP-free TiO_2 Pigments without performance trade offs

with **Borchi® Gen 1750 & 1252** dispersants

Alkyd emulsion with waterborne pigment paste



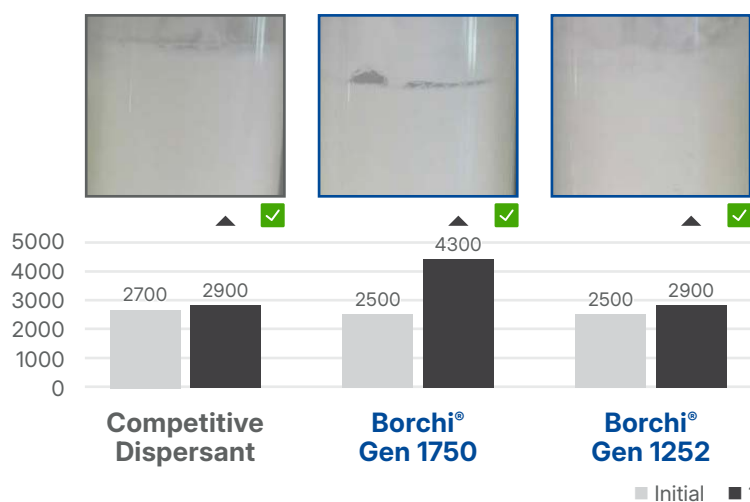
Trimethylolpropane (TMP) is under review in the EU for reproductive toxicity classification

Outstanding Emulsion Stability when Switching to TMP-free

Viscosity at 1/s (mPa·s)

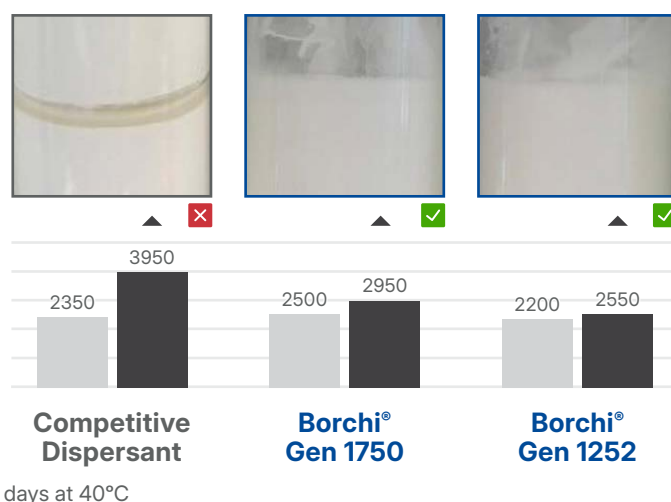
Kronos 2190 (TMP pigment)

No separation after 14 days with Competitor and Borchi® Gen



Kronos 2190 (TMP-free pigment)

No separation after 14 days with Borchi® Gen

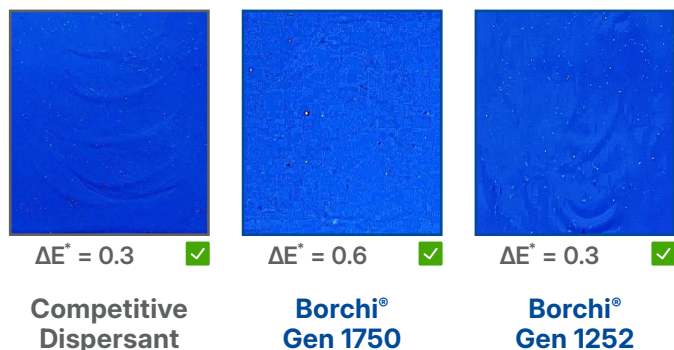


Favorable Rubout Maintained in Tinted Paint

+5% Waterborne Pigment Blue 15:3; Lower ΔE^* = improved rubout

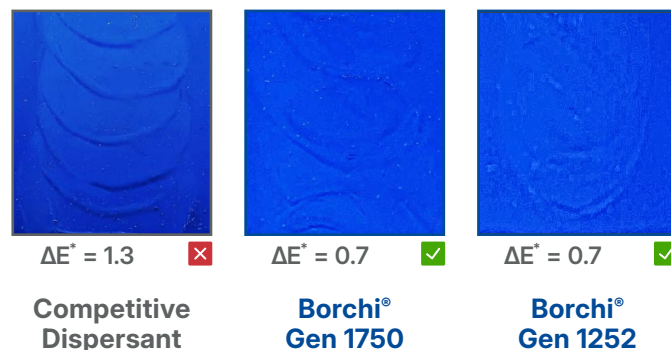
Kronos 2190 (TMP pigment)

Favorable ΔE^* with Competitor and Borchi® Gen



Kronos 2190 (TMP-free pigment)

Most stable ΔE^* value with Borchi® Gen



Starting point formulation on the back →

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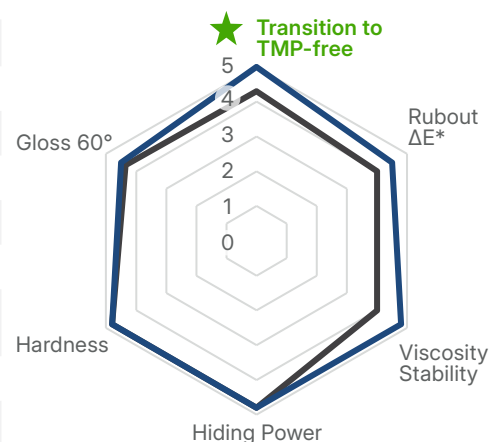
Alkyd emulsion with waterborne pigment paste



Material	Function	Supplier	% by Weight
<i>Alkyd Base</i>			
DI-water	-	-	13.17
Borchi® Burst DFS 500	Defoamer	Milliken	0.30
Borchi® Gel 0625	Rheology Modifier	Milliken	1.20
Synaqua 4804	Alkyd Emulsion	Arkema	50.00
Borchi® Gol 1474	Flow & Leveling Agent	Milliken	0.10
Borchi® Gol 1570	Flow & Leveling Agent	Milliken	0.20
Borchi® OXY-Coat 1101	High-Performance Catalyst	Milliken	0.20
Halox 570 (30% neutralized in DI-water)	Corrosion Inhibitor	ICL/Halox	3.00
Borchi® Gel 0434	Rheology Modifier	Milliken	2.50
TiO_2 Pigment Paste (listed below)	-	-	29.33
Total			100
<i>TiO_2 Pigment Paste</i>			
			18.5
Water	-	-	(Borchi® Gen 1750) 21.88
			(Borchi® Gen 1252) 5.63
Borchi® Gen 1750 (40% active) or Borchi® Gen 1252 (100% active)	Dispersant	Milliken	(Borchi® Gen 1750) 2.25 (Borchi® Gen 1252)
AMP-95	Amino Alcohol	Brenntag	0.12
Borchers® AF 1171	Defoamer	Milliken	0.25
Borchi® Gel PN	Zr Complex Thickener	Milliken	0.5
Kronos 2190 (TMP-containing) or Kronos 2190 (TMP-free)	TiO_2 Pigment	Kronos	75
Total			100

Performance Attributes

0 = poor, 5 = excellent



DOP (Dispersant on Pigment): 3%
Dispersion with the LAU Shaker: 1 hour
Weight Ratio Pigments: glass beads = 1:1
Particle Size: <10 μm / Hegman 8

Click the contact link below to see **more results**
across resin systems and TiO_2 pigments



For more information, please reach us at [borchers.com/contact](https://www.borchers.com/contact)

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