

THE SYNTHETIC ULTRA-WHITE PIGMENT

TOR BRITE® F Product Specification

AlO(OH) content, %	99.9
Whiteness, (CIE L*)	98
Physical Form	White
Particle Size – d ₅₀ , µm	1.0
Oil Absorption, %	28
Mohs Hardness	4.5
Refractive Index	1.7
Specific Density, g/cm ³	3.0

TOR BRITE® F is a unique, high quality TiO₂ synergist offering exceptional brightness / whiteness (high L* value and low b* value) and maximum White TiO₂ substitution in applications including Paints, Powder Coatings and Gel Coats. TOR BRITE® F can typically replace 5% of expensive White TiO₂ in previously optimized formulas. TOR BRITE® F has good scrub, acid and alkali resistance, excellent weatherability and is suitable for matt to high gloss requirements.

Excellent Scrub Resistance – 10,000 Scrub Cycles (Water Based Latex Acrylic Wall Paint)

Using TOR BRITE® F Without TOR BRITE® F
(5% TiO₂ Replacement)

Using TOR BRITE® F (5% TiO ₂ Replacement)	Masstone DE = 0.3 (vs Reference) Gloss @ 60° = 17.4	Reference Gloss @ 60° = 17.4	Without TOR BRITE® F
Water 23.65	No Scrub 10,000 Cycles Scrub NO CHANGE NO CHANGE	Reference Gloss @ 60° = 17.4	Water 23.65
Cellosize QP 4400 0.40			Without TOR BRITE® F
Orotan 371DP 0.97			Water 23.65
Bavaloid 681-F 0.30			Cellosize QP 4400 0.40
Troysan 198 0.10			Orotan 371DP 0.97
White TiO ₂ 19.00			Bavaloid 681-F 0.30
TOR BRITE® F 1.00			Troysan 198 0.10
Eckalite 1+ 5.00			White TiO ₂ 20.00
Ropaque Ultra E 5.00			TOR BRITE® F 0.00
Acrylic Latex AC261 34.30			Eckalite 1+ 5.00
26% Ammonia 0.10			Ropaque Ultra E 5.00
Propylene Glycol 8.25			Acrylic Latex AC261 34.30
Texanol 1.93	26% Ammonia 0.10		
Total 100.00	Total 100.00	Total 100.00	

	Using TOR BRITE® F	Without TOR BRITE® F
Colour	L = 97.6 a = -0.3 b = 1.7	L = 97.3 a = -0.4 b = 1.8
QUV-A 1500 Hrs	No chalking (DE = 0.2)	No chalking (DE = 0.2)
Opacity (DFT 50µm)	91.5	91.5

Alkali Resistance Test (2% NaOH, pH = 13.4)

Using TOR BRITE® F (Control Panel)	Using TOR BRITE® F (Tested Panel)	Without TOR BRITE® F (Tested Panel)	Without TOR BRITE® F (Control Panel)
<i>Dip in NaOH Solution for 48 Hours</i>			
DE = 0.0	DL = -0.4 Da = 0.2 Db = 0.8 DE = 0.9	DL = -0.9 Da = 0.2 Db = 1.3 DE = 1.6	DE = 0.0