

Test Report No 221024-2

Aim of Testing: quality control based on the requirements of the federal specification TT-P-1952F (17 FEB 2015) for paint, traffic and airfield marking

LIMBOROUTE LW48F Airport (waterborne), Federal Standard 595C 33538 (yellow)

Characteristic	Test method	Requirement		Test result
		Min	Max	
Yellow color match (CIE illuminant D65)	ASTM D1729-16 + TT-P-1952-F, 4.3.9.4	appropriate color match to Federal Standard 595 color number 33538		similar to standard, slightly lighter
Accelerated weathering (400 µm wet-film thickness, 300 h, UVB-313)	ASTM G154-16 + TT-P-1952-F, 4.3.10	passed		
Yellow color match after accelerated weathering	ASTM D1729-16 + TT-P-1952-F, 4.3.9.4	appropriate color match to Federal Standard 595 color number 33538		similar to standard
Volatile organic content (VOC)	ASTM D2369-20		150 g/l	32,5 g/l
Consistency	ASTM D562-10	80 KU	90 KU	86 KU
Solids by volume	ASTM D2697-03	60 %		62,8 %
Dry opacity (300 µm wet-film thickness)	ASTM D2805-11 + TT-P-1952-F, 4.3.11	0,92		0,99
Dry time (no pick up)	ASTM D711-20		10 min	8 min
Fineness of dispersion	ASTM D1210-05	3,0 Hegman		> 7,5 Hegman
Bleeding ratio	ASTM D868-21	0,95		1,00
Pigment by weight	ASTM D3723-05	60 %	62 %	61 %

LIMBOROUTE LW48F Airport (waterborne), Federal Standard 595C 31136 (red)

Characteristic	Test method	Requirement		Test result
		Min	Max	
Color (CIE illuminant D65)	ASTM D2244-21 + TT-P-1952-F, 4.3.9.3		6,0 (ΔE_{ab}^*)	$\Delta E_{ab}^* = 0,7$
Accelerated weathering (400 μm wet-film thickness, 300 h, UVB-313)	ASTM G154-16 + TT-P-1952-F, 4.3.10	passed		
Color after accelerated weathering	ASTM D2244-21 + TT-P-1952-F, 4.3.9.3		6,0 (ΔE_{ab}^*)	$\Delta E_{ab}^* = 1,3$

LIMBOROUTE LW48F Airport (waterborne), Federal Standard 595C 34108 (green)

Characteristic	Test method	Requirement		Test result
		Min	Max	
Color (CIE illuminant D65)	ASTM D2244-21 + TT-P-1952-F, 4.3.9.3		6,0 (ΔE_{ab}^*)	$\Delta E_{ab}^* = 2,1$
Accelerated weathering (400 μm wet-film thickness, 300 h, UVB-313)	ASTM G154-16 + TT-P-1952-F, 4.3.10	passed		
Color after accelerated weathering	ASTM D2244-21 + TT-P-1952-F, 4.3.9.3		6,0 (ΔE_{ab}^*)	$\Delta E_{ab}^* = 1,6$

LIMBOROUTE LW48F Airport (waterborne), Federal Standard 595C 35180 (blue)

Characteristic	Test method	Requirement		Test result
		Min	Max	
Color (CIE illuminant D65)	ASTM D2244-21 + TT-P-1952-F, 4.3.9.3		6,0 (ΔE_{ab}^*)	$\Delta E_{ab}^* = 1,8$
Accelerated weathering (400 μm wet-film thickness, 300 h, UVB-313)	ASTM G154-16 + TT-P-1952-F, 4.3.10	passed		
Color after accelerated weathering	ASTM D2244-21 + TT-P-1952-F, 4.3.9.3		6,0 (ΔE_{ab}^*)	$\Delta E_{ab}^* = 3,0$

LIMBOROUTE LW48F Airport (waterborne), Federal Standard 595C 37038 (black)

Characteristic	Test method	Requirement		Test result
		Min	Max	
Color (CIE illuminant D65)	ASTM D2244-21 + TT-P-1952-F, 4.3.9.3		6,0 (ΔE_{ab}^*)	$\Delta E_{ab}^* = 0,3$
Accelerated weathering (400 μm wet-film thickness, 300 h, UVB-313)	ASTM G154-16 + TT-P-1952-F, 4.3.10	passed		
Color after accelerated weathering	ASTM D2244-21 + TT-P-1952-F, 4.3.9.3		6,0 (ΔE_{ab}^*)	$\Delta E_{ab}^* = 3,9$

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iLF Magdeburg GmbH



Dr. Ute Holzhausen
Head Material Analytics



Dipl.-Ing. (FH) Tobias Böttge
Person in Charge