

Test Report No 221024-1

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 K828F Airport (solventborne), Federal Standard 595C 33538 (yellow)

Characteristic	Test method	Requirement		Test result
		Min	Max	
Freeze-thaw stability (three cycles)	ASTM D2243-20 + TT-P-1952-F, 4.3.8	no coagulation or flocculation, no change in consistency greater than 10 KU		no coagulation or flocculation, consistency: + 1 KU
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
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	369,4 g/l
Consistency	ASTM D562-10	80 KU	90 KU	90 KU
Solids by volume	ASTM D2697-03	60 %		63,5 %
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	10 min
Fineness of dispersion	ASTM D1210-05	3,0 Hegman		4,5 Hegman
Bleeding ratio	ASTM D868-21	0,95		0,99
Pigment by weight	ASTM D3723-05	60 %	62 %	61 %

LIMBOROUTE K828F Airport (solventborne), 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}^*)	$\Delta E_{ab}^* = 5,1$
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}^*)	$\Delta E_{ab}^* = 5,4$

LIMBOROUTE K828F Airport (solventborne), 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}^*)	$\Delta E_{ab}^* = 2,8$
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}^*)	$\Delta E_{ab}^* = 4,6$

LIMBOROUTE K828F Airport (solventborne), 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}^*)	$\Delta E_{ab}^* = 3,2$
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}^*)	$\Delta E_{ab}^* = 3,2$

LIMBOROUTE K828F Airport (solventborne), 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}^*)	$\Delta E_{ab}^* = 1,0$
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}^*)	$\Delta E_{ab}^* = 0,8$

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