

WEST VIRGINIA DIVISION OF HIGHWAYS
JOB MIX FORMULA MICRO-SURFACING

WVDOH MCS&T Acceptance:	
Date:	
Reviewed By:	
Approval #:	

Producer:		Design Lab:				
Producer Code:		Lab Location:				
Date:		Designed By:				
A. Job Mix Formula						
Component	Type	Min %	Target %	Max %	Source	Source Code
Aggregate						
Mineral Filler						
Water						
Emulsion						
Residual						
Additive						
B. Aggregate						
Moisture (%)						
Sand Equivalent (%)	AASHTO T176					
Soundness	MP 703.00.22					
Sieve	Percent Passing	Specification		Effect of Moisture		
		2FA	3FA			
3/8" (9.5 mm)		100	100			
#4 (4.75 mm)		90 - 100	70 - 95			
#8 (2.36 mm)		60 - 85	45 - 70			
#16 (1.18 mm)		45 - 70	28 - 50			
#30 (600 µm)		25 - 45	19 - 34			
#50 (300 µm)		18 - 30	12 - 25			
#100 (150 µm)		10 - 21	7 - 18			
#200 (75 µm)		5 - 15	5 - 15			
C. Emulsion Data						
Test on Emulsion		Result	Specification			
			CQS-1hP	CQS-1P		
Residue	AASHTO T59		62.0% min	62.0% min		
Particle Charge	AASHTO T59		Positive	Positive		
Sieve Test	AASHTO T59		0.10% max	0.10% max		
Viscosity, Saybolt	AASHTO T72		20 - 100s	20 - 100s		
Test on Residue						
Penetration	AASHTO T49		40 - 90	90 - 200		
Ash Content	AASHTO T111		1% max	1% max		
Elastic Recovery	AASHTO T301		50% min	60% min		
Softening Point	AASHTO T53		135F min	128F min		
D. Field Simulation						
Test		Result	Specification			
Wet Stripping Test	ISSA TB 114		90% min			
Wet Tack Abrasion 1 hour	ISSA TB 100		538 g/m ² (50 g/ft ²) max			
Wet Tack Abrasion 6 days	ISSA TB 100		807 g/m ² (72 g/ft ²) max			
Schulze-Breuer and Ruck	ISSA TB 144		2.0 g max			
Trial Mix Time at 77F	ISSA TB 113		Ctrl to 120 s min			
Trial Mix Time at 100F	ISSA TB 113		Ctrl to 35 s min			
Cohesion at 30 min	ISSA TB 139		12 kg-cm min			
Cohesion at 60 min	ISSA TB 139		20 kg-cm or NS min			
Lateral Displacement	ISSA TB 147		5% max			
Sand Adhesion	ISSA TB 109		538 g/m ² (50 g/ft ²) max			

Remarks: