

Evaluation Table:

PEP ID:	
Manufacturer:	
Product Name:	

709 Dual Component Pavement Markings
 ADOT Specifications: 709

White Dual Component Pavement Marking Material:

Material Property	Specification/ Test Method	Requirements	Results	Pass/ Fail
Material Type	709-2.01	The dual component pavement marking material shall be a liquid or 100% solids epoxy or other dual component UV-stabilized system, formulated and designed to provide a simple volumetric mixing ratio of the two components (resin and catalyst).		
Compatibility	709-2.01	The material shall be suitable for application to old and new asphaltic concrete and Portland cement concrete pavement surfaces.		
White Pigment (TiO ₂), min, %	709-2.02(A)	18% by weight		
Epoxy Resin, %	709-2.02(A)	75-82% by weight		
Epoxide Number	709-2.02(B) ASTM D1652	± 50 of the published manufacturer's standard		
Anime Number	709-2.02(C) ASTM D2704	± 50 if the published manufacturer's standard		
Toxicity	709-2.02(D)	When heated the material shall not exude toxic fumes toxic which are injurious to persons or property.		
Adhesion to Concrete, min, %	Test Method Outlined in Section 709-2.02(E) ACI Method 503	100% concrete failure at 4,000 psi		
Hardness	709-2.02(F) ASTM D2240	Shore D 70 to 95		
Abrasion Resistance, max, mg	Test Method Outlined in Section 709-2.02(G) ASTM C501	90 mg		
Tensile Strength, min, psi	709-2.02(H) ASTM D638	≥ 6,000 psi		
Compressive Strength, min, psi	709-2.02(I) ASTM D695	≥ 11,000 psi		

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Retroreflectance, min, mcd	709-2.02(J) ASTM E1710	200 mcd		
Color	709-2.02(K)	<u>White</u> Federal Test Standard Number 595B Color Chip No. 37875		
Yellowness Index, max	709-2.02(L) ASTM D1925	23		
Viscosity, min, %	709-2.02(M) ASTM D2196 Method A	The viscosity of each component part shall be within 10% of each other at the recommended spray temperature.		
No-Track Time, min, min	709-2.02(N) ASTM D711	30 minutes at 40 °F 20 minutes at ≥ 70 °F		
Curing Time, min, hrs.	709-2.02(N) ASTM D711	Epoxy shall be capable of curing at 32 ° F Epoxy shall cure within 72hrs at 75 ± 2 ° F		
Glass Beads Appearance	709-2.03	The glass beads shall be colorless, transparent, free from milkiness or excessive air bubbles, and essentially clean form surface scarring or scratching.		
Glass Beads Spherical Shape, min, %	709-2.03 ASTM D1155, Procedure A	$\geq 70\%$		
Glass Beads, Refractive Index, min	709-2.03 Liquid Immersion Method A 25 DC	$\geq 1.5\%$		
Glass Beads, Silica Content, min, %	709-2.03	$\geq 60\%$		
Glass Beads, Gradation, Type A	709-2.03 ASTM D1264	Type A Glass Beads (Large Bead)		
		Sieve No.	% Retained	
		10	0	
		12	0-5	
		14	5-25	
		16	40-80	
		18	10-40	
		20	0-5	
Pan	0-2			
Glass Beads, Gradation, Type B	709-2.03 ASTM D1264	Type B Glass Beads (Small Bead)		
		Sieve No.	% Retained	
		20	0-5	
		30	5-25	
		50	30-75	
		80	9-32	
		100	0-5	
Pan	0-2			

Material Property	Specification/ Test Method	Requirements		Results	Pass/ Fail
Glass Beads, Coating	709-2.03	The Type A and B glass beads shall have a moisture-proof coating and shall be dual-coated with a silane-type adherence coating.			
Glass Beads, moisture absorption	709-2.03	The glass beads shall display no tendency to absorb moisture in storage and shall remain free of clusters and lumps.			
Glass Beads, flow	709-2.03	The beads shall flow freely from dispensing equipment at the time of application.			
Glass Beads, Moisture Resistance	709-2.03 708-2.02(C) AASHTO T 346	All glass beads shall have a moisture-proof adhesion enhancing overlay, consisting of a properly formulated material which prevents bead clumping and clogging and promotes proper embedment and adhesion to the applied paint. The beads shall conform to AASHTO T 346			
Glass Beads, Heavy Metal Concentration, max, ppm	709-2.03 708-2.02(B)(6) EPA Method 3052 EPA Method 6010B	Heavy Metal	Concentration		
		Arsenic	<75 ppm		
		Antimony	<75 ppm		
		Lead	<90 ppm		