ALABAMA
DEPARTMENT OF TRANSPORTATION
MAINTENANCE BUREAU
1409 COLISEUM BOULEVARD
MONTGOMERY, ALABAMA 36130-3050

PHONE (334) 242-6272 ***FAX (334) 242-6378***

Bob Riley
GOVERNOR

Joe McInnes
TRANSPORTATION DIRECTOR

Maintenance Bureau Specification 2006-02
High Build Traffic Paint
Glass Beads
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HIGH BUILD PAINT:

High Build Paint shall meet the performance requirements given in ASTM D 6628 with the exception of the following:

The initial daytime chromaticity for yellow materials shall fall within the box created by the following coordinates:

Initial Daytime Chromaticity Coordinates (Corner Points)				
	1	2	3	4
X	0.530	0.510	0.455	0.472
Y	0.456	0.485	0.444	0.400

The initial daytime chromaticity for white materials shall fall within the box created by the following coordinates:

Initial Daytime Chromaticity Coordinates (Corner Points)				
	1	2	3	4
X	0.355	0.305	0.285	0.335
Y	0.355	0.305	0.325	0.375

White and yellow materials shall meet the following luminance factor requirements:
- White: Daylight luminance factor at 45 degrees/0 degrees - 50 % minimum;
- Yellow: Daylight luminance factor at 45 degrees/0 degrees – 35 % minimum.

All yellow materials using lead chromate pigments shall meet the criteria of non-hazardous waste as defined by 40 CFR 261.24 when tested in accordance with EPA Method 1311, Toxicity Characteristics Leaching Procedures (TCLP). The striping and marking material, upon preparation and installation, shall not exude fumes which are toxic, or detrimental to persons or property. All material using lead free pigments shall NOT contain either lead or other Resource Conservation and Recovery Act (RCRA) materials, in excess of the standard defined by EPA Method 3050 and 6010. The paint shall be easily stirred and mixed to a uniform consistency prior to use.

Traffic marking materials shall be shipped in containers that are plainly marked with the weight in pounds per gallon {kilograms per liter}, the volume in gallons {liters}, the color, user information, date of manufacture, lot and batch number. Each batch shall have a unique number. A statement of the percentage composition of the pigment, the proportion of pigment to vehicle, and the name and address of the manufacturer shall also be shown. The label shall contain any instructions for special handling or precautions for use of the material that are recommended by the manufacturer. The date of manufacture and the shelf life shall be shown for materials that have a shelf life. Containers with inadequate identification and marking will not be accepted for use.

High Build Paint shall meet the following requirements.

PHYSICAL AND PERFORMANCE REQUIREMENTS FOR HIGH BUILD TRAFFIC PAINT		
PROPERTY	VALUE	TEST METHOD
Acrylic Resin	100 % Rohm & Haas Rhoplex Fastrack HD-21A emulsion with 48.5 – 49.5 % solids content, or Dow DT 400NA acrylic emulsion with 49.5 – 51.5 % solids content, or an approved equal.	ASTM D 2743 Infrared Spectral Analysis
Nonvolatiles in Vehicle	42 % Minimum by Weight	ASTM D 215
No Track Time	Maximum of 10 minutes	ASTM D 711
Volatile Organic Content	Maximum of 1.25 Pounds per Gallon	ASTM D 3960
Pigment Content	62 ± 2 % by Weight	ASTM D 3723
Total Solids Content	Minimum of 73 % by Weight Maximum of 79 % by Weight	ASTM D 2369
White Pigment Content, Rutile Titanium Dioxide	Minimum of 1.0 Pound per Gallon	ASTM D 476
Yellow Pigment Content, Hansa Yellow (11-2400)	% minimum per manufacturer	-
Viscosity @ 77ºF (25ºC) Kreb Units	78 – 95	ASTM D 562
Density in Pounds per Gallon	White – 13.7 Minimum Yellow – 13.1 Minimum	ASTM D 1475
Scrub Resistance	Pass Minimum 300 cycles	ASTM D-2486
PH	9.6 Minimum	ASTM E 70
Daylight Reflectance %	White – 80 Minimum Yellow – 50 Minimum	ASTM E 1349

GLASS BEADS:

Glass Beads shall meet the requirements given in AASHTO M 247 and the latest edition of the USDOT "Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects". The glass beads shall be manufactured from commercial grade soda lime glass cullet from North American sources containing less than 0.1 weight percent crystalline silica. Type 1 and Type 3 glass beads used for drop on beads shall have a dual coating, one coating for adhesion over a coating for moisture resistance.

Glass beads shall meet the gradations shown in the following table.

GRADATIONS OF GLASS BEADS, % PASSING DESIGNATED SIEVE		
Sieve Size *	Type of Gradation	
	Type 1	Type 3
12		100
14		95 - 100
16	100	80 - 95
18		10 - 40
20	95 - 100	0 - 5
25		0 - 2
30	75 - 95	
40		
50	15 - 35	
80		
100	0 - 5	
* Sieve analysis in accordance with the requirements given in ASTM D 1214		