



## Florida Department of Transportation

JEB BUSH  
GOVERNOR

605 Suwannee Street  
Tallahassee, FL 32399-0450

DENVER J. STUTLER, JR.  
SECRETARY

September 28, 2006

Mr. J. Chris Richter  
Program Operations Engineer  
Federal Highway Administration  
545 John Knox Road, Suite 200  
Tallahassee, Florida 32303

Re: Office of Design, Specifications  
Section 916  
Proposed Specification: **9160401 Bituminous Materials-Requirements**

Dear Mr. Richter:

We are submitting, for your approval, two copies of a proposed Supplemental Specification for Bituminous Materials-Requirements.

This change was proposed by Tom Malerk of the State Materials Office to provide tack materials that will provide better resistance to pick-up and “tracking”, and tack materials that will “break” readily for night work.

Please review and transmit your comments, if any, within two weeks. Comments should be sent via Email to SP965DB or [duane.brautigam@dot.state.fl.us](mailto:duane.brautigam@dot.state.fl.us).

If you have any questions relating to this specification change, please call Duane F. Brautigam, State Specifications Engineer at 414-4110.

Sincerely,

Signature on file

Duane F. Brautigam, P.E.  
State Specifications Engineer

DFB/bd

Attachment

cc: General Counsel  
Florida Transportation Builders' Assoc.  
State Construction Engineer

**BITUMINOUS MATERIALS-REQUIREMENTS.****(REV 7-269-27-06)**

SUBARTICLE 916-4.1 (Pages 779-783) is expanded by the following:

**916-4.1 Requirements.**

EMULSIFIED ASPHALT GRADE CRS-1h		
Test	Conditions	Minimum/Maximum
Tests on Emulsion:		
Saybolt Furol Visc	77°F{25°C}	20 – 100 seconds
Storage Stability	24 hour	maximum 1%
Demulsibility	35 ml 0.8% Sodium Dioctyl Sulfosuccinate (a)	minimum 60%
Sieve Test		<i>maximum</i> 0.10% <del>max</del>
Residue by Distillation	500°F. Distillation {260°C}	minimum 55%
Naphtha Portion	500°F. Distillation {260°C. Distillate} (b)	maximum 3% by volume
Particle charge		positive
Tests on Residue From Distillation Test:		
Penetration (0.1mm)	77°F{25°C}, 100g, 5 seconds	minimum 60
Viscosity	140°F {60°C}	minimum 1600 poise {160 Pa S}
Ductility	77°F {25°C}	minimum 400 mm
Solubility	in Trichloroethylene	minimum 97.5%
(a) The demulsibility test shall be made within 30 days from the date of shipment.		
(b) When CRS-1 has been modified to include naphtha, the 24 hour storage stability will be waived.		

EMULSIFIED ASPHALT GRADE NTSS-1hm		
Test	Conditions	Minimum/Maximum
Tests on Emulsion:		
Saybolt Furol Visc.	77°F{25°C}	<del>25-20</del> – 500 seconds
Storage Stability	24 hour	maximum 1%
Settlement	5 days	maximum 5%
Residue by Distillation		minimum <del>35</del> 50%
Naphtha Content	500°F. Distillation {260°C}	maximum 1% by volume
Sieve Test	500°F. Distillation {260°C. Distillate}(a)	<i>maximum</i> 0.100.30% <del>max</del> (a)
<del>Particle charge</del>		<del>positive</del>
Tests on Residue From Distillation Test:		
Penetration (0.1mm)	77°F{25°C}, 100g, 5 seconds	<del>minimum 60</del> <i>maximum 20</i>
Softening Point ASTM D36		minimum 149°F{65°C}

## Asphalt Jobs

Dynamic Shear Rheometer AASHTO T315	$G^* \sin \delta$ , 186.8°F [86°C] @ 10rad/sec	minimum 1.00 kPa
Solubility	in Trichloroethylene	minimum 97.5%
(c) Sieve test may be waived if no application problems are present in the field.		

**BITUMINOUS MATERIALS-REQUIREMENTS.**  
**(REV 9-27-06)**

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Sieve Test		maximum 0.10%
Residue by Distillation	500°F. Distillation	minimum 55%
Naphtha Portion	500°F. Distillation. (b)	maximum 3% by volume
Particle charge		positive
Tests on Residue From Distillation Test:		
Penetration (0.1mm)	77°F, 100g, 5 seconds	minimum 60
Viscosity	140°F	minimum 1600 poise
Ductility	77°F	minimum 400 mm
Solubility	in Trichloroethylene	minimum 97.5%
(d) The demulsibility test shall be made within 30 days from the date of shipment.		
(e) When CRS-1 has been modified to include naphtha, the 24 hour storage stability will be waived.		

EMULSIFIED ASPHALT GRADE NTSS-1hm		
Test	Conditions	Minimum/Maximum
Tests on Emulsion:		
Saybolt Furol Visc.	77°F	20 – 500 seconds
Storage Stability	24 hour	maximum 1%
Settlement	5 days	maximum 5%
Residue by Distillation		minimum 50%
Naphtha Content	500°F. Distillation	maximum 1% by volume
Sieve Test		maximum 0.30% (a)
Tests on Residue From Distillation Test:		
Penetration (0.1mm)	77°F, 100g, 5 seconds	maximum 20
Softening Point ASTM D36		minimum 149°F
Dynamic Shear Rheometer AASHTO T315	G* sin $\omega$ , 186.8°F @ 10rad/sec	minimum 1.00 kPa
Solubility	in Trichloroethylene	minimum 97.5%
(f) Sieve test may be waived if no application problems are present in the field.		