

EXPECTED IMPLEMENTATION JANUARY 2007

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932 NONMETALLIC ACCESSORY MATERIALS FOR CONCRETE PAVEMENT AND CONCRETE STRUCTURES.

(REV 3-24-06) (FA 6-1-06) (1-07)

SUBARTICLE 932-1.2 (Pages 816 and 817) is deleted and the following substituted:

932-1.2 Joint Sealer for Pavement and Structures:

932-1.2.1 General: This Specification covers joint sealer intended for use in sealing joints in asphaltic concrete pavement and portland cement concrete pavement. These materials may also be used to seal joints in portland cement concrete bridges and other structures.

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932-1.2.2 Material: The joint sealant shall be composed of a mixture of materials, typically but not limited to bituminous based, that will melt when heated for application and then solidify to form a resilient and adhesive compound capable of sealing joints in portland cement concrete and/or asphaltic concrete against the infiltration of moisture and foreign materials throughout normal pavement conditions and at ambient temperatures. The manufacturer shall have the option of formulating the material according to their Specifications. However, the requirements delineated in this Specification shall apply regardless of the type of formulation used. The material shall cure sufficiently to not flow from the joint or be picked up by vehicle tires after 3 hours at 77°F. The material shall be capable of a uniform application consistency suitable for filling joints without the inclusion of large air holes or discontinuities and without damage to the material.

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Materials for pavement joints shall be tested according to ASTM D 5329. Manufacturers or distributors seeking approval of their material in accordance with this Specification shall demonstrate the performance of their products in accordance with Florida Test Methods FM 5-532.

932-1.2.2.1 Physical Requirements of Joint Sealants for Portland Cement Concrete Only:

Parameter	Limits
Pour Point	Greater than or equal to 20°F lower than the safe heating temperature as stated by the manufacturer.
Cone-Penetration, Non-immersed at 77°F, 150g, 5s	Greater than or equal to 20°F lower than the safe heating temperature as stated by the manufacturer.
Flow at 40°F, 5 h	Less than or equal to 5.0 mm
Bond, Non-immersed, 0°F for 5 cycles*	No cracking, separation, or opening that at any point is over 1/4 inch deep, in the sealant or between the sealant and the substrate.

*The depth of a crack, separation or opening shall be measured perpendicular to the side of the sealant showing the defect. At least two test samples in a group of three representing a given sample of sealant shall meet this requirement.

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932-1.2.2.2 Physical Requirements of Joint Sealants for Portland Cement Concrete and/or Asphaltic Concrete:

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Parameters	Limits
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Safe Heating Temperature	Equal to the pouring temperature as identified by the manufacturer
Cone-Penetration, Non-immersed at 77°F, 150g, 5s	Less than or equal to 90 mm
Flow at 40°F, 5 h	Less than or equal to 3.0 mm
Bond, Non-immersed, -20°F for 3 cycles*	No cracking, separation, or opening that at any point is over 1/4 inch deep, in the sealant or between the sealant and the substrate.
Resilience at 77°F	Recovery greater than or equal to 60%
Asphaltic Concrete Compatibility at 140°F	No failure in adhesion, formation of an oily exudates at the interface between the sealant and the asphaltic concrete, or softening or other deleterious effects on the asphaltic concrete or sealant.
*The depth of a crack, separation or opening shall be measured perpendicular to the side of the sealant showing the defect. At least two test samples in a group of three representing a given sample of sealant shall meet this requirement.	

932-1.2.3 Certification: The Contractor shall provide the Engineer a certification conforming to the requirements of Section 6 from the manufacturer, confirming that the joint sealer materials meets the requirements of this Section.

932-1.2.4 Qualified Products List: The joint sealant materials used shall be one of the products listed on the Department's Qualified Products List (QPL). Manufacturers seeking evaluation of their product shall submit an application in accordance with Section 6.

932-1.2.5 Shipment: The material shall be delivered in containers plainly marked with the manufacturer's name or trademark product name, LOT number and date of expiration.

932-1.2.6 Bond Breaker Rod: The bond breaker rod shall be a closed cell, expanded polyethylene foam rod of the size and dimensions shown on the plans. It shall be compatible with the joint sealant and no bond or reaction shall occur between the rod and the sealant.

All bond breaker rods installed shall be covered by a sealant at the end of each work day.

Bond breaker tape approved by the sealant manufacturer may be used in lieu of bond breaker rod when sealing random cracks.