

**SUPERPAVE ASPHALT CONCRETE – REINFORCING FIBERS IN ASPHALT.
(REV 2-14-19)**

ARTICLE 334-2 is expanded by the following:

334-2.5 Reinforcing Fibers: When specified in the Contract Documents, provide reinforcing fibers conforming to the requirements below. Design the asphalt mixture without the fiber. Do not alter the final mix design for the addition of fiber at the asphalt plant.

334-2.5.1 General: Furnish all materials, equipment, labor, and incidentals for mixing aramid fiber into the asphalt mix. Continuously feed and mix treated aramid fiber into the asphalt mix per the dosage and mixing requirements of this Specification. Upon project completion, provide a certification report signed and sealed by a Professional Engineer registered in the State of Florida, stating the actual dosage rate used for the project and that all Specification requirements were adhered to.

334-2.5.2 Materials: Aramid fibers must be treated to prevent them from becoming airborne during the mixing process and the treatment must become soluble in the asphalt binder. Meet the following material properties:

<u>Aramid Properties</u>	
Material	Para-Aramid Fiber (50-52% by weight)
Form	Filament Yarn
Tensile Strength	> 2.758 (GPa)
Elongation at Break	< 4.4 (%)
Modulus	> 95 (GPa)
Specific Gravity	1.44-1.45 (g/cm ³)
Decomposition Temperature	> 800 (°F)
<u>Treatment Properties</u>	
Treatment Type	Sasobit® Wax (48-50% by weight)
Treatment Melting Temperature	> 175 (°F)
<u>Short Cut Aramid Fiber Bundles</u>	
Length	1.50 +/-0.05 (inch)
Appearance/Handling	Free Flowing Coated Fiber Bundles (visual)
Storage	Store dry with no contact with moisture

334-2.5.3 Dosage & Mixing Requirements: Use an aramid dosage rate of 2.1 ounces (plus or minus 5.0%) per ton of mix. This does not include the treatment weight.

Use an automated dosing machine to feed the treated aramid fibers into the mixing drum through the RAP collar. Meter and continuously feed treated aramid fibers in a consistent manner for uniform disbursement. Calibrate the metering based on the asphalt production rate (tons/hr), and the dosage rate (oz/ton). Mix the fibers with the heated aggregates before injection of the liquid asphalt during the asphalt mixing process.