POLYESTER FIBER
TECHNICAL DATA SHEET

DAWNVIEW

Dawnview™ The new type of crack-resistant and reinforcing material called Polyester Fiber specifically for enhancing asphalt concrete. It is made from 100% polyester synthetic material, processed into bundled monofilament synthetic fibers through unique techniques. It has advantages such as high strength, corrosion resistance, high temperature resistance, and strong chemical stability. It exhibits excellent adhesion with asphalt. When added to asphalt concrete and mixed, it forms a three-dimensional random distribution of a large quantity of fiber monofilaments, acting as reinforcement and bridging elements. This effectively enhances the mechanical properties of asphalt mixtures and prevents the cracking of asphalt concrete.

PERFORMANCE

- **Improved high-temperature stability of asphalt concrete:**

Due to the three-dimensional distribution of polyester fiber monofilaments and their strong adsorption with asphalt without entanglement, the cohesion of asphalt concrete increases and its viscosity improves. Additionally, the reinforcement and bridging effect of interlaced fiber monofilaments reduces the flowability of asphalt, leading to significantly enhanced stability of asphalt concrete under high-temperature conditions.

- **Improved low-temperature crack resistance of asphalt concrete:**

In sudden temperature drops and low-temperature environments (such as winter in northern regions), conventional asphalt pavements tend to shrink or crack due to insufficient stress relaxation. By adding polyester fibers to asphalt concrete, the mixture contains a large amount of uniformly distributed interlaced fiber monofilaments, enhancing the elasticity of the asphalt mixture. This imparts good deformation resistance, maintaining flexibility and high tensile strength even at low temperatures, effectively combating shrinkage stress and reducing thermal cracking, thus improving the low-temperature crack resistance of asphalt concrete.

- **Enhanced fatigue resistance of asphalt concrete:**

The uniform distribution and reinforcement effect of polyester fibers in the mixture increase the modulus of elasticity by 1.3-1.4 times, thereby improving the fatigue characteristics.

Polyester fibers significantly improve the water stability, peel resistance, wear resistance, and durability of asphalt concrete, effectively resisting the formation of reflective cracks, thereby greatly improving the quality and extending the service life of the pavement.

Polyester fibers effectively enhance tensile, compressive, shear, and impact strength.

TECHNICAL DATA

Type:	Polyester Fiber (PESF)
Length	3-50 mm Customizable
Equivalent diameter	10-25 μm
Specific gravity	1.36-1.38g/cm³
Tensile strength	≥500MPa
Melting point	240-260° C
Elongation at break	≥15%
Ignition point	＞560° C
Acid-alkali resistance (retention of strength)	≥92%
Heat resistance	Under the conditions of 220° C for 2 hours, there is no change in volume.

Dawnview Geosynthetics Co., Ltd.
Email: info@dawnviewfiber.com
Tel/Whatsapp: +86 1751 5382 215
WWW.DAWNVIEWFIBER.COM