



Basalt fiber

Basalt fiber chopped yarn for asphalt is a short-cut fiber with good bonding with asphalt formed by special surface treatment on the basis of continuous basalt fiber. It is a competitive product that replaces lignin fiber, polyester fiber and other asphalt concrete additives. It can significantly improve the high temperature stability, low temperature crack resistance, water damage resistance and fatigue resistance of asphalt concrete, and can greatly improve the service life of asphalt concrete.

The main effects of basalt chopped fiber modified asphalt concrete

1. Increase asphalt dosage and reduce oil spillage;
2. Increase dynamic stability, improve high temperature rutting resistance and fatigue damage resistance;
3. Improve temperature stress resistance, reduce the occurrence of thermal shrinkage cracks, and improve low temperature crack resistance of pavement;
4. Improve the early water damage resistance of asphalt pavement;
5. Improve the cohesiveness of the mixture;
6. It is conducive to improving the production efficiency and economic benefits of construction projects.

Performance indicators

Item	index	Standards Reference
Tensile strength a/MPa, $\geq$	1200	JT/T 776.1-2010 "Basalt fiber and its products for highway engineering - Part 1: Basalt chopped fibers"
Elastic modulus b/GPa, $\geq$	75	
Elongation at break c/%, $\leq$	3.1	
Alkali resistance, single fiber breaking strength retention rate/% $\geq$	0.2	

Basalt fiber chopped yarn is a product made by chopping continuous basalt fiber strands. The fiber is coated with (silane) impregnation agent. Therefore, basalt fiber chopped yarn is the material of choice for reinforcing thermoplastic resins.

At the same time, basalt fiber is also a material for reinforcing concrete and needle-punched non-woven fabrics. Basalt is a high-performance volcanic rock component. This special silicate makes basalt fiber have excellent chemical resistance, especially alkali resistance. Therefore, basalt fiber is an excellent material to replace

polypropylene (PP) and polyacrylonitrile (PAN) for reinforcing cement concrete; it is also a competitive product to replace polyester fiber, wood cellulose, etc. for asphalt concrete, which can improve the high temperature stability, low temperature crack resistance and fatigue resistance of asphalt concrete. Basalt chopped fiber is suitable for various asphalt concrete pavements such as mastic asphalt macadam mixture (SMA), open graded asphalt macadam mixture (OGFC), dense graded asphalt concrete (AC), semi-open graded asphalt concrete pavement, poured asphalt concrete, etc. It is suitable for various fields such as road paving, bridge deck paving, tunnel paving, overpass and municipal highway.

Product Application

1. Basalt fiber chopped yarn is suitable for dense graded asphalt concrete (AC)
2. Asphalt mastic macadamia mixture (SMA)
3. Open graded asphalt concrete (OGFC)
4. Various asphalt concrete pavements such as fiber seal
5. Applicable to various fields such as pavement paving, bridge deck paving, tunnel paving, overpass and municipal highways.
6. Suitable for reinforcing resins, it is a high-quality material for manufacturing sheet molding compounds (SMC), block molding compounds (BMC), and dough molding compounds (DMC)
7. Suitable for compounding with resins as reinforcing materials for automobile, train, and ship hulls
8. It is a selected material for reinforcing cement concrete and asphalt concrete, and is used as a reinforcing material for the anti-seepage, cracking, and compression of hydropower station dams and to extend the service life of roads
9. It can be used for condensing towers in thermal power plants and steam cement pipes in nuclear power plants
10. Used for high-temperature resistant needle felt: automotive sound-absorbing sheets, hot-rolled steel, aluminum pipes, etc.



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