

BASALT FIBERS TECHNICAL DATA



FMB 40 P.15

Example for mineral fiber basalt (FMB) with diameter of 40 microns, chopped (P), with long intervals of 15mm, "FMB 40 R.15 TU U V.2.7-8.26-32673353-001: 2007"

Recommended areas of application of concrete products, reinforced with basalt fiber:

- Waterworks, construction work with the aggressive environment;
- Earthquake engineering;
- Highways with heavy traffic;
- Substitute of steel elements in concrete;
- Bridges;
- Nuclear power plants and related facilities;
- Self-leveling floors.
- Runways;
- Containers for radioactive waste disposal and transport of nuclear fuel;
- Shafts and tunnels;
- Curbs, rails and paving tiles;
- Monolithic and high-rise housing construction;
- Driven pile foundation;
- Road slabs, railway sleepers;
- Construction of buildings with special requirements for fire safety.

Product description

Property	Description
Type of fiber	basalt
Fiber diameter, μm	30-80
The length of the segments, mm	3-50
Type of sizing	without
Humidity % wt	>0.4

Chemical composition of fibers

fiberbas

Oxides	Basalt
SiO ₂	48,9
TiO ₂	2,7
Al ₂ O ₃	15
Fe ₂ O ₃	8,8
FeO	6,4
MnO	0,2
MgO	5,1
CaO	8,4
Na ₂ O	2,3
K ₂ O	0,7
S	-
P ₂ O ₅	0,3
H ₂ O	0,75
Σ	99,7

Mechanical properties

Type of fiber	Fiber diameter, μm	Tensile strength, MPa
basalt	30	1200
basalt	40	1000

Chemical resistance of fibers

Aggressive environment	fiber d _m =40 μm
H ₂ O resistance, %	99,9
0,5 N NaOH resistance, %	99,7
2N NaOH resistance, %	97,3
2N HCl resistance, %	94,1