

KV42

High performance assembled roving series

Roving nomenclature

Example: HBCF 13-1200-KV42-2 Int./200

HBCF – high performance basalt continuous fiber

13 - monofilament diameter [μm]

1200 - linear density [tex]

KV42 – type of sizing

-2 – with additional gluing compatible with epoxy and phenolic resins

Int./200 – bobbin for internal unwinding, internal diameter 200 mm (tubeless)



Processing

KV42 is the newest modification of the KV12 sizing with improved performance and increased alkali resistance. Basalt roving of this series is mainly recommended for filament winding, pultrusion, processing into woven fabrics, UD tapes, multiaxial fabrics, prepregs and other products based on epoxy or phenolic resins.

Product description

HBCF roving is an assembled roving with significantly lower level of catenary. Due to reduced catenary and additional gluing, this type of assembled roving has a form of a “ribbon” which is a great advantage for many processing technologies.

Property	Description
Type of fiber	Basalt
Monofilament diameter [μm]	13-17
Linear density [tex]	1200-4800
Type of sizing	silane
Sizing content (% wt.)	≥ 0.4
Resin compatibility	Epoxy and phenolic
Additional gluing:	
-0	Without any additional gluing
-2	With additional gluing for epoxy and phenolic resins
Type of bobbins:	
Int./200	Bobbins for internal unwinding, internal diameter 200 mm
Ext.	Bobbins for external unwinding, wound on a tube with 76 mm internal diameter and 270mm length
Moisture content (% wt.)	< 0.1

Mechanical properties

Properties in epoxy impregnated strand (ASTM D2343)	
Tensile strength, MPa	2900-3100
Tensile modulus, GPa	86 ± 2

Tensile strength of dry fiber (ASTM D3822)	
Tenacity, mN/tex	
for 13-16 μm	≥ 650
for 17 μm	≥ 550

Applications

High pressure vessels, CNG cylinders, pipes, boat building, pultruded profiles, concrete reinforcing bars, wind mill blades, fabrics for different applications. This roving is ideally suited for those applications where almost zero catenary is required.

Packaging information

Type of bobbins	Amount of roving, kg
Bobbin for internal unwinding, internal diameter 200 mm	10; 12
Bobbin for external unwinding, on a tube with 76 mm internal diameter	8

Roving is supplied on a 120x80 cm pallet with 4 or 6 layers, each bobbin is wrapped in thermo retractable film.

On a 4-layered pallet 44 bobbins of 10-12 kg or 96 bobbins of 8 kg of assembled roving could be supplied.

On a 6-layered pallet 66 bobbins of 10-12 kg of assembled roving could be supplied.