

Bekinox[®] VS

Stainless steel fibers for the anti-static textile industry

Bekaert Bekinox[®] VS metal fiber is a stretchbroken sliver of very fine stainless steel fibers. They can be blended with all spun fibers at the spinning mill to obtain anti-static yarns in a wide range of yarn numbers.

Woven fabrics, tufted and woven carpets, knitted and braided fabrics, and needle-punched felts are made permanently electrostatically controlled when small quantities of Bekinox[®] fibers are blended with the textile material. The concentration of Bekinox[®] to be blended depends upon: nature of textile fiber, technical requirements of the applications, wear etc.

Bekinox[®] VS has superior washing characteristics (high durability) and fulfills EN1149-1, EN1149-3, EN1149-5 and EN61340-5-1. Thanks to its superior conductive properties, the garment does not charge.



Work safely in inflammable and explosive environment



Dust filters with Bekaert fibers prevent explosions



Bekaert Bekinox[®] VS

How can your company benefit from Bekaert anti-static textiles?

This datasheet gives an overview of how Bekaert stainless steel fibers can make your product anti-static. If you want to find out in detail how these high quality fibers, filaments and yarns can work for you too, we are happy to advise.

Being close to you is central to the Bekaert strategy. This means you can count on your local contacts who speak your language and are close to your business. Our sales and services teams are there for you in Belgium, Brazil, China, India, Japan, Korea and USA.

Do not hesitate to contact us:

stainlesssteeltxtiles@bekaert.com - antistatic.bekaert.com

Product range

Standardtype: Bekaert Bekinox®	Composition	Diameter	Count		Tensile strength	Average elongation	Electrical resistance*
			dtex	denier			
VS 08	100% Bekinox®	8 µm	3.6	3.2	6 cN	1%	190 Ω/cm
VS 12	100% Bekinox®	12 µm	9.1	8.2	17 cN	1%	84 Ω/cm

* theoretically determined. The electrical resistance is indicative. For exact values, please request a product specification.

Specifications

Specific weight: 8.03 g/cm³ - Specific electrical resistivity: 0.74 Ωm/mm²

Blending

Bekaert Bekinox® can be blended

- with all textile materials in all **spinning systems**. It is very important that an even distribution of the metal fibers is obtained.
- on the **worsted or semi-worsted system**: the fiber sliver is introduced at the pindrafter together with the appropriate number of synthetic or natural fiber tops.
- on the **woollen system**: introduce the sliver after the hopper feeder, before the first card.
- in the production of **non-wovens**: the sliver can be introduced as on the woollen spinning system on condition a cross-lay system is installed before the last card.
- in the **cotton-type spinning**: the blending of Bekinox® is done on the drafter.
- in **textile fibers**: some fiber manufacturers offer Bekinox® containing fiber blends for anti-static textiles.

Norms

EN1149: standard to determine the electrostatic properties of protective clothing used in flammable and explosive atmospheres

EN1149-1: surface resistance test method (for surface conductors only)

EN1149-3: charge decay test method (suitable for surface and core conductors)

EN1149-5: performance requirements for EN1149-1 and EN1149-3

EN61340-5-1: standard for garments used in the manufacturing and assembling process of the electronic industry

Did you know that?

- Static electricity is generated e.g. when two unlike materials make contact and are separated from each other, for instance by friction of garments.
- Experience has shown that a fabric can be considered as anti-static when its surface resistivity < 10⁹ Ω. Fabrics containing Bekaert Bekinox® metal fibers have a resistivity way below this limit.
- Tests proved that only surface conductors such as Bekinox® do not charge up in earthed conditions, because they discharge immediately.
- People wearing protective clothing always need to be grounded during use (EN1149-5). If people become isolated from earth there is a serious risk that sparks from the people themselves could ignite a flammable or explosive atmosphere.