

## Conductive textiles



**Durable textile solutions for transferring power and signals**

## Bekaert in a nutshell

- Customers in 120 countries and in the most diverse industry sectors
- A world market and technology leader in steel wire transformation and coating technologies
- High investments in research and development
- An international team of R&D specialists
- Almost 30 000 employees worldwide
- Listed on Euronext® Brussels - BEL20®
- Headquarters in Belgium
- Founded in 1880
- Combined sales in 2015: € 4.4 billion
- Consolidated sales in 2015: € 3.7 billion



### **Imagine what we can do for you**

Are you looking for stainless steel fibers that can transfer power and signals reliably? Bekaert's stainless steel fibers are durable and soft, and they can be used in situations when copper would break. They can be processed into steel and blended textiles that can be manipulated to suit your needs. Their flexibility leads to comfortable textiles without compromising on corrosion resistance and washability.

### **Working with you**

Co-creation is an important part of our way of working. We want to think with you to take your ideas from a thought to a product. It's an aspect that many of our customers in conductive textiles, as well as in heat resistant fabrics, appreciate. Our in-house development teams will not simply give you a 'one size fits all' product. We will think with you to discover new ways in which our fibers can be used.

### **Your partner in innovation**

Bekaert's control over the entire production process means that your textiles can be developed with the product properties you need. We have the ability to draw wire in ultra-fine diameters and can tailor our fine cables to offer you the specific characteristics you need. Your result is the reliable transfer of data, power, and/or signals in numerous applications.

### **A global partner, close to you**

For 130 years now, customers in more than 120 countries have continued to work with Bekaert. Working with us means you can count on local contacts that speak your language and are close to your business. Our presence in just about every sector is a unique strength, both for Bekaert and for our customers.



## Conductive textiles, a reliable solution for different applications

Bekaert's products can be used anytime you need to transfer power, data and/or signals. In our advanced world, and with a growing trend towards integrating more functionality in one product, you require more from the electrical cable that you use today. Our stainless steel fiber bundles can do more: integrated in your fabric, it becomes a smart textile. Our products can be engineered to cover your needs of increased durability and higher flexibility. The unique base material we use is surprisingly soft and guarantees the highest comfort in direct or indirect contact with the human body.

Each situation is unique and your customers' requirements may vary. This is why we have a range of products available as well as the possibility to tailor our solution to what you really need.

### **Stainless steel fibers: a smart solution**

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With the shift in computer interaction away from the traditional keyboard and screen to the world around us, the future of smart textiles is limited only to our imagination. Would you like to be able to play music through your outfit? Maybe you would like to have solar panels in your jacket that can charge your phone? Perhaps in the future you may design sheets that can send data about your body temperature to a thermostat, adjusting it to your ideal setting.

Consider developing products like heatable gloves with integrated fibers. They could keep people warm in winter and consumers will not have to remove their gloves to operate their touchscreen devices. The signals of phones could be enhanced with wearable antennas. The growing elderly population can be served by weaving pressure-sensitive alarms into sweaters that can detect if an older person has fallen.

Whenever data and signals need to be transmitted safely, reliably, and comfortably, consider Bekaert. We want to partner with you to develop innovative products, so you can serve new markets and new customers.



## Medical

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Bekaert Bekinox® VN is comfortable, washable and corrosion resistant and can be used in situations when reliability matters the most: sudden infant death syndrome (SIDS) alarms for babies, enuresis alarms for children and adults, or in the plastic coated wires of heart monitors, etc.



## Automotive

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Because life is being increasingly spent in cars, manufacturers for the automotive sector have opportunities to bring enhanced features that can improve the safety, security and quality of daily life. Bekinox® VN is durable enough to withstand the day to day wear inside of a car, guaranteeing a correct transmission of a signal from the sensor to the control unit.



## Sports and Other Applications

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In sports, an athlete needs to have not only a rigorous exercise schedule, but also a thorough healing process. Bekaert stainless steel fibers are used in electrotherapy by sending the power needed to electrically stimulate a body's muscles. The treatment has a number of health benefits such as blood circulation and relaxation of muscle spasms. Our stainless steel fibers also have the same healing properties as silver and can be woven into bandages to reduce the time needed to return to peak condition.



## A world of possibilities

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In addition to the applications listed, Bekaert can develop with you to create new solutions for your company. We have the willingness to explore your previously uncharted markets. We have the people to think with you. We have also the engineering know-how to make it work. Our experience in advanced metal transformations and advanced coatings means we can tailor a solution for you, one that meets the balance between comfort, durability and resistance.

You can rely on Bekaert to help you bring a new idea into reality.

## Global presence to support your business

Your need for worldwide service is met just around the corner.

The close proximity of our warehouses and plants to your production sites results in a constant supply of conductive textiles, fast deliveries and minimal inventory held in your sites. Our strategic presence in different regions guarantees a flexible and just-in-time supply.

Furthermore, you can count on our local sales and service teams for technical commercial support. Dedicated account managers work closely with you on your project and can advise you about how our conductive textiles can fulfill your needs.

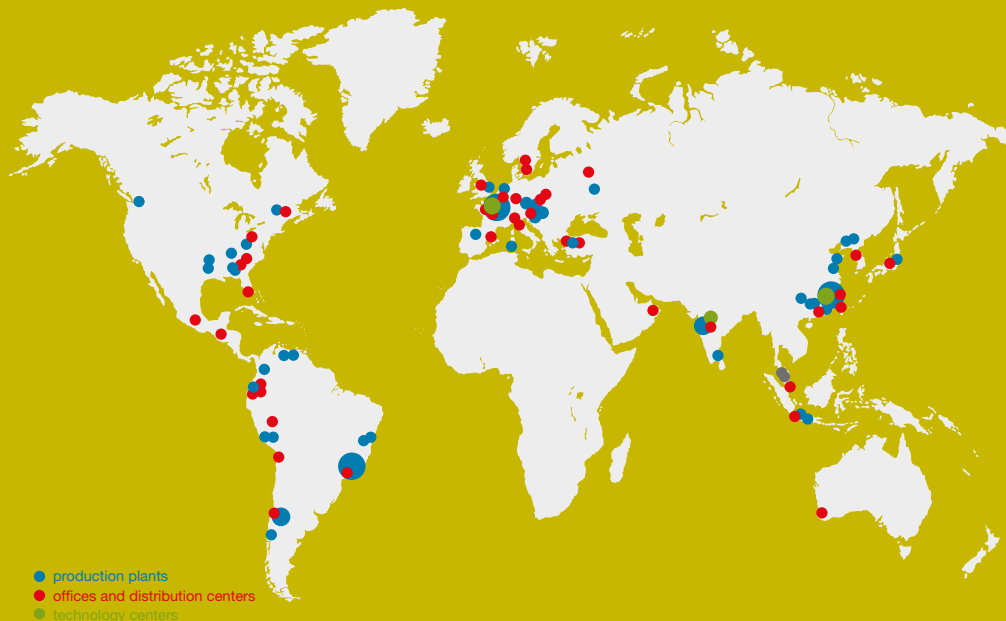
## Developing for tomorrow

Being at the forefront of technological evolution is one of our key pillars.

We attach particular importance to co-development, starting from highly specific problems or business situations because, to us, innovation is a continuous improvement process.

Our technology centers are equipped with lab facilities for both fundamental and applied research. This allows us to develop solutions that are customized for your business, so that you benefit from shorter development cycles and consistently reliable product quality.

At Bekaert, R&D goes beyond product development. We can assist you to reach new markets with products in innovative applications. Anytime you're thinking of developing a new generation of smart textiles, searching for new ways to add advanced systems into automobiles, or designing a product requiring power or signal transfer, Bekaert may very well be the partner you need.



## Product portfolio based on your needs

Bekaert Bekinox® fibers and yarns are engineered to your needs, be them conductivity, signal and/or data transfer. Choosing Bekaert is choosing for more than just conductivity. We offer more drapeability and durability than copper, as well as more comfort in direct or indirect contact with the body.

The fibers can be bundled and woven into yarns in a range of different yarn counts and filament sizes. These bundles can also be brought together in order to reach your optimal balance of resistance and flexibility.

You can find Bekinox® in both 100% stainless steel and blended materials, and it is produced in both slivers and yarns.

### Total Quality Management

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Maintaining a high level of quality is a continuous process. That is why our quality procedures are regularly evaluated and why we use the feedback of our customers to do so. Our extensive quality control and defect filtering offers a consistency warranty while eliminating excessive waste and safeguarding the quality of your product. Choosing Bekaert is choosing for a high performance product supported by Total Quality Management.



Bekaert Bekinox® VS  
stainless steel fibers for the textile industry



Bekaert Bekinox® VN  
continuous stainless steel filament yarn



Bekaert Bekinox® BK  
highly electrically conductive spun yarn



## How can your company benefit from Bekaert conductive textiles?

### Building close partnerships

We want to work with you to better understand your needs.

It's a pre-condition for building close partnerships that result in solutions that work for your company. With control over the entire production process, the fibers can be developed with the product properties you need. We have the ability to draw wire in ultra-fine diameters and to find unique coatings. We can tailor our product to offer you specific conductive and heat resistant characteristics. Your results are oxidation resistance and stress-free performance.

If you want to find out how our high quality fibers, filaments and yarns can work for you too, we are happy to advise.

Please contact your local Bekaert specialist.

[www.bekaert.com](http://www.bekaert.com)

### Bekintex NV

Industriepark Kwatrecht  
Neerhonderd 16  
BE-9230 Wetteren  
T +32 9 365 71 11  
F +32 9 365 71 17

### Bekaert do Brasil Ltda

Av. Marechal Rondon, 1215  
Prédio ADM 2º Andar  
BR-06093-900 Osasco/São Paulo  
T +55 11 2147 8535  
F +55 11 2147 8758

### Bekaert Corporation

1395 South Marietta Parkway  
Building 700, Suite 708  
US-Marietta, Georgia 30067-4440  
T +1 770 421 8520  
F +1 770 421 8521

### Bekaert Japan Co. Ltd.

4F, 1-2-5, Kyobashi, Chuo-ku  
JP-Tokyo 104-0031  
T +81 3 3243 2522  
F +81 3 3243 2521

### Bekaert Management (Shanghai) Co. Ltd.

17F, Block E, Waterfront Place  
No. 31, Lane 168, Daduhe Road  
CN-200062 Shanghai  
T +86 21 2219 7000  
F +86 21 2219 7399

### Bekaert Korea Ltd.

3F Changwoo Bldg.,  
#553 Dogok-Dong, Gangnam-gu  
KR-Seoul 135-270  
T +82 2 539 8760  
F +82 2 539 8780