Why choose Bekaert?

The wire drawing and coating specialist

Bekaert has the flexibility, technical background, and the technical and customer support you need to create what shape, composition or mechanical performance. Headquartered in Belgium, we have been producing continuously for over 130 years and are available in over 120 countries.

Your strategic partner

Our global footprint means that we can combine our strengths across our steel cord plants in Europe, North America, Latin America and Asia. Our local support means that we are at your service all the time. We will work closely with you to create a technology solution that meets your needs.

Experience in automotive

Bekaert is the global technology leader in steel wire transformation and coatings: one in every four tires in the world is reinforced with Bekaert steel cord.

Bekaert has a long history of manufacturing and developing products that drive value creation for its customers in the tire sector. Our strong focus on innovations and the company's firm belief in customer proximity all over the world, have made Bekaert a preferred supplier to the tire industry.

The product range for the automotive sector is extensive. In addition to tire cord, it includes: flat and shaped wire for components, wire and cables for window systems, radius spring wire, wiper blades, etc. From the smallest spring to the strongest tire cord, we deliver safe and reliable products that allow for efficient production, fewer components, better performance, and more.

Your partner in quality

As a leading provider of comprehensive solutions, Bekaert specialty steel wire meets your specifications to the utmost degree of accuracy and performance this world has to offer. You depend on us to deliver what you need, when you need it.

Your business is our business, and this includes learning about your processing challenges, quality standards and service needs. Bekaert truly stands behind its quality assurance.

Would you like to learn more about TAWI?

Let us know. We’re listening.

Bekaert is a world market and technology leader in advanced solutions based on steel wire transformation and coatings.

Bekaert (Euronext Brussels: BEKB) was established in 1880 and is a global company headquartered in Belgium, employing approximately 30,000 people worldwide. Serving customers in 120 countries, Bekaert pursue sustainable profitable growth in all its activities.

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Why choose Bekaert?
The wire drawing and coating specialist Bekaert has the flexibility, technological background, and the technical know-how to provide any wire to meet almost every application, composition or mechanical characteristic. Headquartered in Belgium, we have been producing continuously for over 130 years and are available in over 120 countries.

Your strategic partner
Our global footprint means that we can combine our strengths across our steel cord plants in Europe, North America, Latin America, and Asia. Our local support means that we are at your service all the time. We will work closely with you to create a lasting solution that meets your needs.

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Create a longer-lasting, more eco-friendly tire

Ternary Alloy on Wire: TAWI
Bekaert introduces a breakthrough in tire reinforcement with TAWI: Ternary Alloys WIre coating on tire cord.

This patent-pending coating of Bekaert is comprised of copper, zinc and cobalt, and yields advancements in the performance and environmental impact of tires. TAWI uses cobalt where it is needed, at the interface between steel cord and rubber, eliminating the need for cobalt in the bulk rubber. Cobalt-free rubber compounds are more durable and exhibit less hysteresis. Together with significantly better adhesion in hot and humid conditions, TAWI spearheads the creation of longer-lasting and more eco-friendly passenger and truck tires.

Benefits
- outstanding adhesion in hot and humid climates
- reduced rolling resistance
- longer lasting tires
- reduced CO₂ emissions and fuel consumption

The market's most sustainable tire cord solution

When we develop new products for the automotive market, we consider their present-day impact as well as their impact on the future. It is our aim to help tire manufacturers reach ambitious sustainability targets.

Eco-friendly performance
Tires account for approximately 30% of a vehicle’s fuel consumption as well as CO₂ emissions and other polluting exhausts. Without cobalt as a rubber ingredient, there is the potential for a significant reduction in rolling resistance. This reduction could improve fuel consumption, CO₂ emission levels and local air quality.

Eco-friendly usage
A better bond with TAWI allows for more re-molding of tires. This reduces the amount of virgin materials needed and makes the rubber compound available for further reuse. We see tremendous value for both the truck and bus radial tire (TBR) manufacturers and end-users.

Eco-friendly production
Cobalt is a heavy metal, and removing 80-90% of it from the current usage is a big step forward. For the cobalt plating process, developed by Bekaert, we have taken all possible environmental, health and safety requirements into account. For example, in small PCR tires the technology could remove a little more than 50% of cobalt from the skim rubber. In larger reduction applications, we are currently testing 80% and higher (for retreading, refinish, cutback and truck cord compounds).

Joseph Walter, Tire Technology International,July 2014

In small PCR tires, this technology could remove a little more than 50% of cobalt from the skim rubber. In larger reduction applications, we are currently testing 80% and higher (for retreading, refinish, cutback and truck cord compounds).
A revolution in steel cord coatings

Bekaert introduces a breakthrough in tire reinforcement with TAWI: Ternary Alloy Wire coating on tire cord.

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Together with significantly better adhesion in hot and humid conditions, TAWI spearheads the creation of longer-lasting and more eco-friendly passenger and truck tires.

Benefits

- Outstanding adhesion in hot and humid climates
- Reduced rolling resistance
- Longer lasting tires
- Reduced CO₂ emissions and fuel consumption

There is a 13% improvement in rolling resistance. Tests also indicate that by using TAWI with a cobalt-free compound, a tire’s lifetime is increased and its rolling resistance is decreased.

Because cobalt is not added as a rubber ingredient, millions of euros could be saved by the tire industry. We expect that, thanks to TAWI, 1000’s of tons of cobalt will be eliminated each year in the worldwide tire market by 2020.

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Eco-friendly production

Cobalt is a heavy metal, and removing 80-90% of it from the current usage is a big step forward. For the cobalt plating process, developed by Bekaert, we have taken all possible environmental, health and safety requirements into account. For example, in order to avoid cobalt containing rinsing waters ending up in the waste water plant or in the environment, a Zero Liquid Discharge, continuous plating process has been proven that this can be done in an environmentally sustainable manner.

In small PCR tires, this technology could remove a little more than 1g of cobalt from the skim rubber.

Larger reductions are possible in TBR tires featuring cobalt containing belt and body ply compounds.

Joseph Walter, Tire Technology International, July 2014

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TAWI benefits pay off in climates where heat and humidity have negative effects on a tire’s performance; we see an advantage for tires developed for emerging markets.

Value creation at every step

Cobalt is an expensive strategic material. It is added to the entire rubber compound in order to promote the adhesion of the rubber compound to the steel cord.

However, cobalt also has negative side-effects: namely, it increases the rubber’s crack growth rate, accelerates heat aging of the rubber and does not contribute to sustainability of the tire manufacturing processes.

Additionally, because cobalt is only needed at the interface between steel and rubber, more of it is used than necessary. At Bekaert, we considered an alternative: what if the cobalt was placed where it is needed - on the steel cord itself?

Not only in the adhesion, comparable to brass, in hot and humid environments TAWI outperformed. Tests also indicate that by using TAWI with a cobalt-free compound, a tire’s lifetime is increased and its rolling resistance is decreased.

TAWI + Co-free Compound

BRASS + Compound with Co

Rolling resistance reduction

Total cost of ownership reduction

% Cobalt reduction in tire

Because cobalt is not added as a rubber ingredient, millions of euros could be saved by the tire industry. We expect that, thanks to TAWI, 1000’s of tons of cobalt will be eliminated each year in the worldwide tire market by 2020.

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Your partner in quality

As a leading provider of a comprehensive range of specialty steel wires and cords to automotive component and tire makers around the world, our products exemplify our continuous pursuit for excellence. Your business is our business, and this includes learning about your processing challenges, quality standards and service needs. Before any product reaches you, its quality is assured.

Would you like to learn more about TAWI?

Let us know. Why not integrate your wheel rim into the tire with TAWI. TAWI is a specially developed steel wire alloy that makes it possible in one step and automatically to create a more durable, more eco-friendly tire with lower rolling resistance and improved fuel efficiency.

Connect with us

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Ternary Alloy on Wire: TAWI

Create a longer-lasting, more eco-friendly tire

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Connect with us
**A revolution in steel cord coatings**

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**Benefits**

- Outstanding adhesion in hot and humid climates
- Reduced rolling resistance
- Longer lasting tires
- Reduced CO₂ emissions and fuel consumption

**Value creation at every step**

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Not only does the adhesion of the tire cord and rubber pair significantly improve in hot and humid environments; TAWI outperformed. Tests also indicate that the use of TAWI with a cobalt-free compound not only increases the lifetime of the tire but also decreases its rolling resistance.

Because cobalt is not added as a rubber ingredient, millions of euros could be saved by the tire industry. We expect that, thanks to TAWI, 1000’s of tons of cobalt will be eliminated each year in the worldwide tire market by 2020.

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“As small PCR tires, the technology could remove a little more than 1g of cobalt from the skin rubber. Larger reductions are possible for TBRs by shifting cobalt-containing belt and body ply compounds.”

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Experience in automotive

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Your partner in quality

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We welcome you to visit our website to learn more about our products and services.

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