

STRIVING FOR A SUSTAINABLE FUTURE

WHY - HOW - WHAT



WE KEEP TYRES TURNING LONG AFTER THEY HAVE LEFT THE ROAD



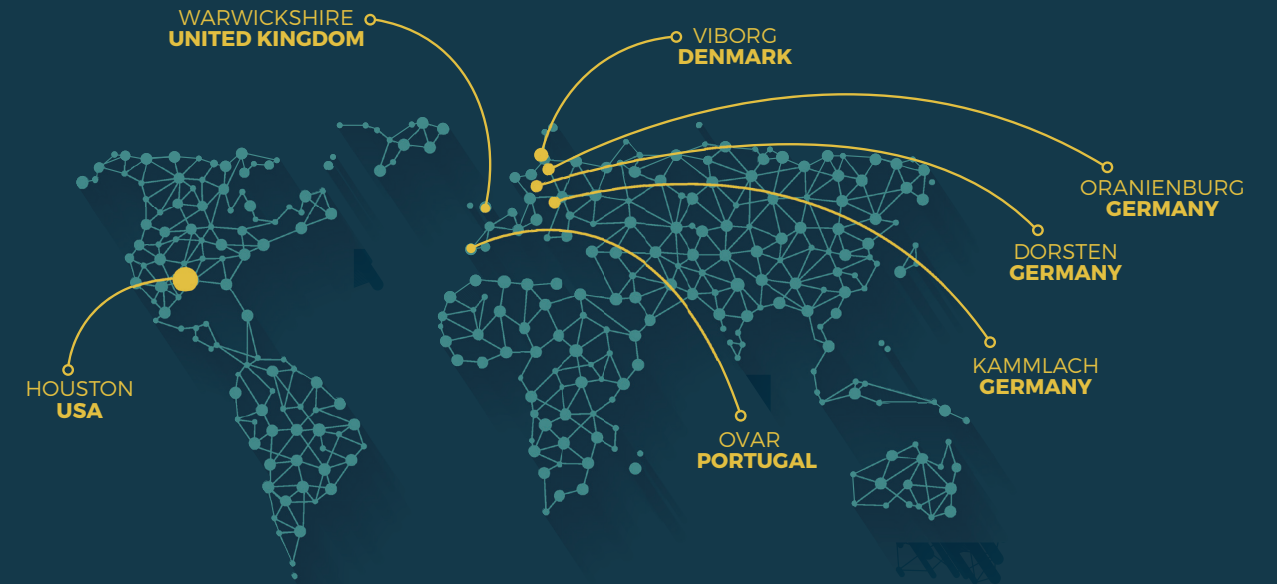
Tyres keep the world moving. As tyres turn, goods are delivered, people are transported, and plans are executed. But what happens when they are worn out and stop turning? Worldwide, more than 7 million tyres are scrapped every day. In many parts of the world, they become a waste problem, as they are left to

degrade in landfill sites – or are incinerated, emitting large amounts of CO₂. At Genan, we have turned this waste problem into a green opportunity. We recycle end-of-life tyres (ELT) for reuse in a variety of ways. Every day, we can recycle up to 150,000 tyres and reduce CO₂ emission to the atmosphere by 280,000 tonnes

a year. That is the equivalent of what 100,000 diesel cars emit in one year. In short, the planet has a problem, and we have a solution. We keep tyres turning in an ongoing circle of life – which makes a substantial difference for the well-being of Earth. We call that: striving for a sustainable future.

AS THE LARGEST TYRE RECYCLER IN THE WORLD,

our vision is that all end-of-life tyres should be recycled in the environmentally and economically most beneficial way.



STRIVING FOR A SUSTAINABLE FUTURE

The core of everything in Genan is sustainability. It is in the very DNA of our company and its employees. To us, sustainability means aiming for a greener planet by doing our best in all of our processes from the intake of end-of-life tyres to the production of clean, high-quality products.

OUR PROMISE

Sustainability is our core value, and we are committed to striving for a sustainable future in every choice we make.

We will be transparent in everything we do.

We will never compromise on quality.

We will always continue to innovate.



The Genan company values are Transparency, Quality and Innovation.

These values underpin every part of our business and business processes. Through

transparency, we invite our stakeholders to get to know us from the inside. By always aiming for the highest quality in our work, we want to show our stakeholders that they

have chosen wisely by liaising with us. Through continuous innovation, we strive to uphold our status as the ultimate development partner.

RECYCLED RUBBER AND THE ENVIRONMENT

Substitution of recycled rubber powder for natural rubber saves rain forests, as the demand for deforestation for new rubber plantations is then limited.

And as rain forests absorb more CO₂ than rubber plantations, the amount of CO₂ emitted to the atmosphere is also reduced.

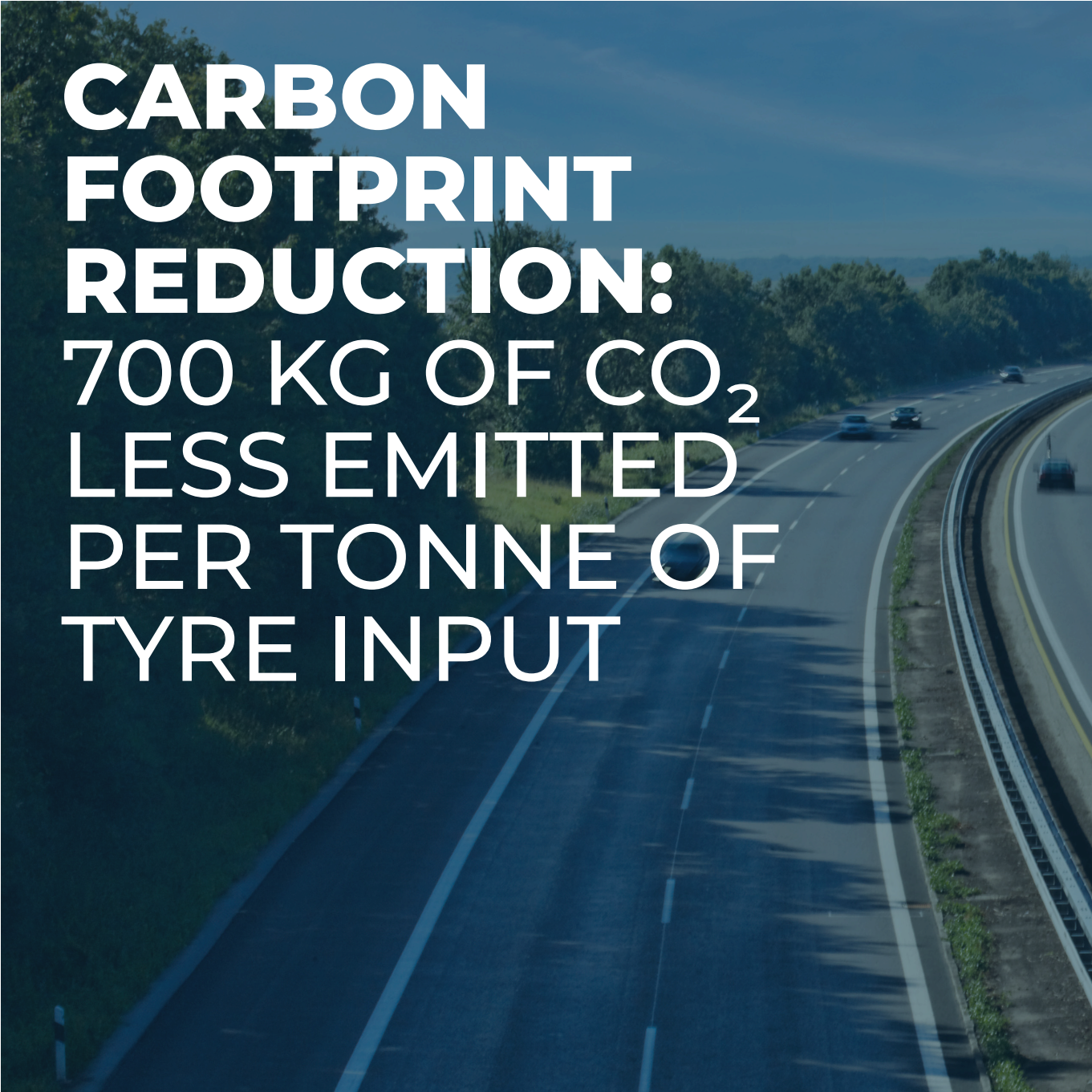
Recycled rubber from end-of-life tyres is widely used in applications where it comes in direct contact with the natural environment. The most common examples are infill material in artificial turf pitches and asphalt for road construction. Numerous scientific studies have been made in a wide range of countries, analysing the environmental impact of recycled rubber.

One major environmental concern has been the potential leaching of metals and organic chemical substances from recycled rubber into drainage water and water recipients. Special attention has been drawn to zinc, PAHs as well as dissolved organic carbon. No evidence has been found to support claims that leaching of chemical substances from infill and e-layers used in artificial turf will cause environmental problems.

In comparison with the incineration of used tyres in cement kilns, the recycling of tyres – through processing into rubber granulate and steel for the substitution of virgin raw materials – offers substantial environmental benefits. Life Cycle Assessment studies document that significantly less CO₂ is emitted to the atmosphere, and the negative impact of the acidification of the atmosphere is significantly reduced. Tyres contain sulphur, as sulphur is used for the vulcanisation process during tyre manufacturing; and this sulphur vaporises in connection with incineration, causing acid rain. When tyre rubber is recycled, sulphur is contained and thus not released into the atmosphere.

It is, however, of paramount importance that recycled rubber is produced in a high quality – and made from known and consistent source material. Many rubber recyclers mix all kinds of scrap rubber, resulting in a recycled product which is not uniform. Genan recycled rubber is made from end-of-life tyres only – and undergoes strict and thorough quality control for a product of consistent quality and purity.





CARBON FOOTPRINT REDUCTION: 700 KG OF CO₂ LESS EMITTED PER TONNE OF TYRE INPUT

Tyres are made from rubber, steel and textile fibres. The quality of tyres is crucial to traffic safety – and tyre manufacturers thus only use the very best raw materials in their productions.

For decades, tyres were simply left at landfills at the end of their product life – a very unsustainable disposal solution, which is unfortunately still widely used throughout the world. Later, the energy content of end-of-life tyres was recovered through incineration in e.g. cement kilns. This was clearly a step forward in comparison with landfilling, but the good raw materials were destroyed, and only a small fraction of the energy originally invested in the production of a tyre

was recovered. The most sustainable solution is material recycling, where end-of-life tyres are processed into new, high-quality raw materials for the substitution of virgin rubber and steel. A solution is only truly sustainable if

Recycling end-of-life tyres at Genan's plants can save up to 280,000 tonnes of CO₂ emissions a year – in comparison with energy recovery through incineration

you can document positive impact on the climate; if there are no negative implications for the environment; if there are no health risks related

to the use of the recycled materials; and if the quality of the recycled materials is so high that the public and the industry are prepared to use it for substitution of virgin materials.

Tyres are made from scarce resources. In future, the supply of virgin steel will be limited. The production of natural rubber involves deforestation of rain forests, leading to a lack of biological diversity. Rain forests absorb more CO₂ than rubber plantations, and when rain forests are deforested in favour of new rubber plantations, less CO₂ is thus absorbed from the atmosphere.

Material recycling is thus paramount.

UNIFORM AND CLEAN RUBBER POWDER AND GRANULATE

Genan only runs large plants with a very high product flow. This, together with the unique Genan technology, ensures extremely consistent and uniform products. The customer knows exactly what he is getting, and the quality will be of the same high level, delivery after delivery.

In order to meet customer demands, Genan offers a wide range of ambient granulates

and powders ranging from granule sizes from 0.2 to 7 mm. Furthermore, Genan produces ultra-fine micronised rubber powder from 40 Mesh (<math>< 425 \mu\text{m}</math>) to 120 Mesh (<math>< 125 \mu\text{m}</math>).

Recycled fine rubber powder and granulate from Genan are virtually free from contaminants. The products only contain an insignificant amount of dust, and on all sizes

smaller than SUPER COARSE, we issue a guarantee of less than 100 grams of impurities per tonne. However, typical values are only 50 grams per tonne.

The most recent addition to Genan's product range is GENAN COATED TOP LAYER – a competitive, colour-coated alternative to traditional EPDM or TPV top layers – available in six different colours.

THE OUTPUT FROM A GENAN PLANT CONSISTS OF APPROX.



Stable mats Playground base layers **Brake pads**
Rubber concrete **Mortar Coatings** Rubber pellets
E-layer for pitches Landing pads **Asphalt modifier**
Rail crossings **Paints** **Infill for football/soccer fields**
Base layer Building protection mats **Tyre filling**
Shockpads **Coasters** Noise reduction **Shoe soles**
Rubber tiles Rail sleepers **Car mats** Sealings
Crack sealant Flooring **Conveyor belts** Rubber tracks

**THE ONLY
LIMIT IS
YOUR
IMAGINATION**



Rubber granulate and rubber powder can be used for many different applications.

Genan rubber products are used for asphalt and bitumen modification; in the sports and leisure segment for e.g. athletic tracks, playgrounds, horse riding arenas and artificial turf; for various industrial rubber products, new tyres, paints, coatings and adhesives as well as plastics. But in fact, the only limit is your imagination...

Regardless of the type of product or compound you are working with, the Genan Innovation Department is ready to offer technical sales support and expertise. At Genan, we are continuously working with innovation and development of new, high-quality rubber products – as well as new applications for our existing products. Choosing a Genan product is choosing a top quality solution with respect for the environment.

Adding Genan is your guarantee of delivering a high-end solution to your customers.

www.genan.com

