

STRIVING FOR A SUSTAINABLE FUTURE

WHY - HOW - WHAT



WE KEEP TIRES TURNING LONG AFTER THEY HAVE LEFT THE ROAD



**THE WORLD
HAS A PROBLEM
– WE HAVE A SOLUTION**

Worldwide, more than 7 million tires are scrapped each day. At Genan, we have turned this waste problem into a green opportunity. Visit our website and learn more about how visionary tire recycling really is.



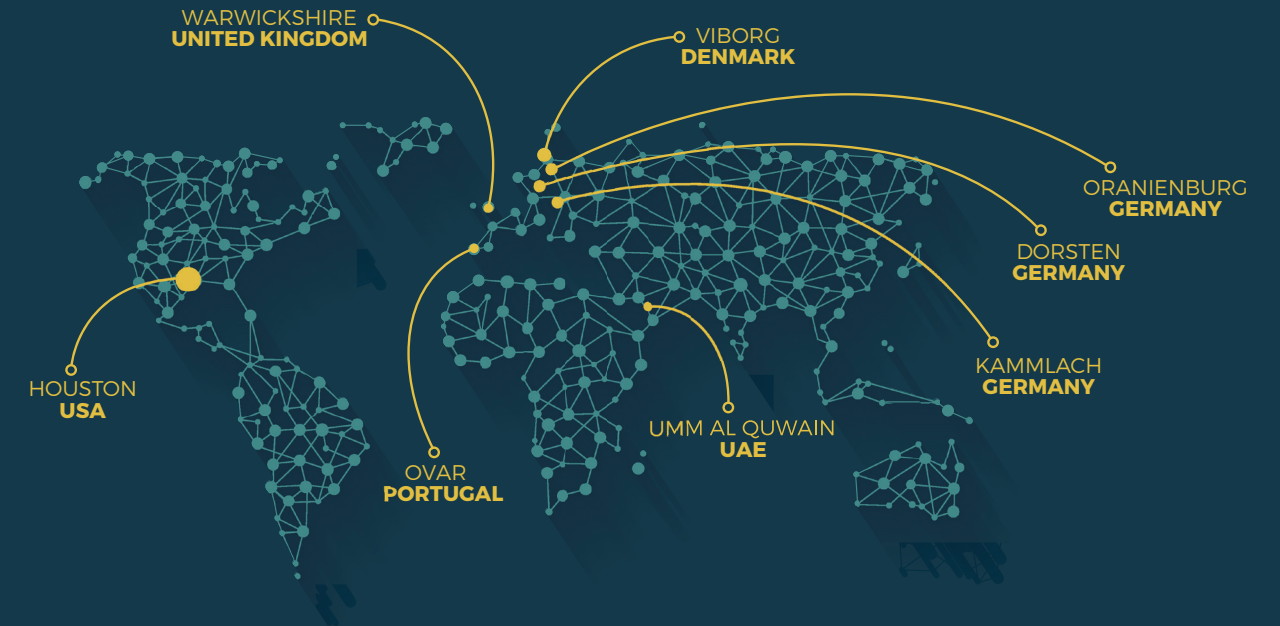
Tires keep the world moving. As tires turn, goods are delivered, people are transported, and plans are executed. But what happens when they are worn out and stop turning? Worldwide, more than 7 million tires are scrapped every day. In many parts of the world, they become a waste problem, as they are 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 tires (ELT) for reuse in a variety of ways. Every day, we can recycle up to 150,000 tires and reduce CO₂ emission to the atmosphere by 280,000 MT

a year – that's 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 tires 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 TIRE RECYCLER IN THE WORLD,

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



STRIVING FOR A SUSTAINABLE FUTURE

The core value for everything at Genan is sustainability. Sustainability is our corporate DNA. When we work sustainably, we create conditions for a greener planet. We strive for sustainable excellence at every stage of our processes: from scrap tire intake to clean, high-quality output.

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.



Transparency, Quality and Innovation are our company values. Through transparency, we invite our stakeholders to get to know us from the inside. We always aim to achieve the

highest quality in our work because we want to show our stakeholders that they made a wise choice and are working with the right partner. Through continuous innovation, we

strive to prove that we are the optimum development partner in the field of sustainable scrap tire recycling.

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 scrap tires is widely used in applications where it comes in direct contact with the natural environment. The most common examples are infill in synthetic turf fields and asphalt used in road construction. Numerous scientific studies in many different countries have analyzed 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 and dissolved organic carbon. There is no evidence to support claims that leaching of chemical substances from infill and e-layers used in synthetic turf causes environmental problems.

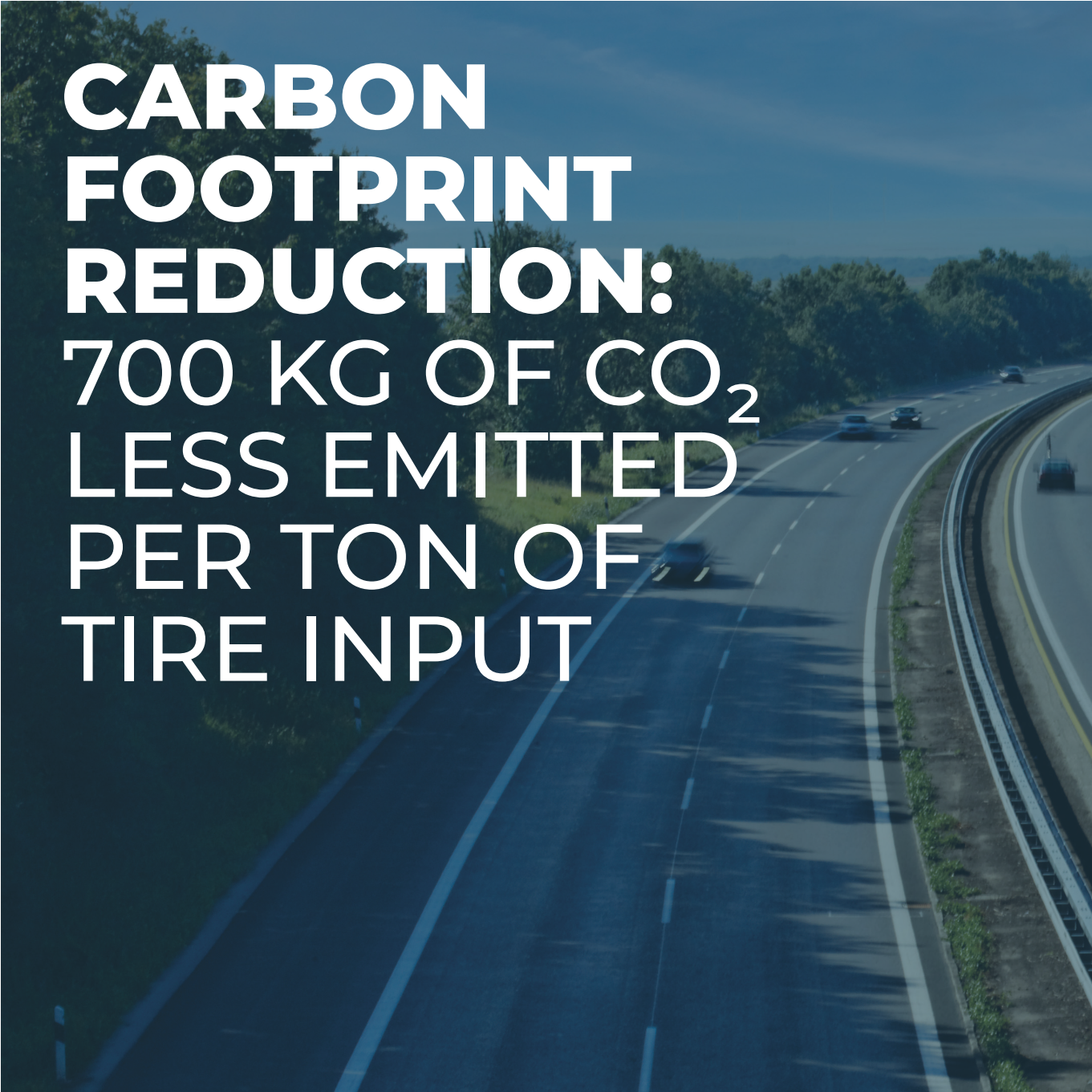
In comparison with the incineration of used tires in cement kilns, tire recycling – processing used tires into rubber granulate and steel as substitutes for virgin raw materials – offers substantial environmental benefits. Life Cycle Assessment studies document that significantly less CO₂ is emitted to the atmosphere, and the negative impact on the atmospheric acidification is significantly lower. Tires contain sulfur, which is used in the vulcanization process. During incineration, sulfur vaporizes, causing acid rain. When tire rubber is recycled, sulfur is contained and therefore 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 that is not uniform or pure.

Genan recycled rubber is made from scrap tires only – and is subject to strict and thorough quality controls.



“GENANVENDELSE”
MEANS RECYCLING
IN DANISH



CARBON FOOTPRINT REDUCTION: 700 KG OF CO₂ LESS EMITTED PER TON OF TIRE INPUT

Tires are made from rubber, steel and textile fibers. The quality of tires is crucial to traffic safety – and tire manufacturers thus only use the very best raw materials in their productions.

For decades, tires 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 tires 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 tire

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

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

meets the following requirements: Can the positive impact on the climate be documented? Are there any negative implications for the

environment? Are there any health risks related to the use of the recycled materials? Is the quality of the recycled materials high enough that the public and industry are prepared to use it for substitution of virgin materials?

Tires 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 favor 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 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 in size from 0.2 to 7 mm. Furthermore, Genan produces ultra-fine, cryogenic rubber powder from 40 Mesh (<425µm) to 120 Mesh (<125µm).

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 3.5 oz of impurities per ton. However, typical values are only 1.8 oz per ton.

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

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 fields Landing pads **Asphalt modifier**
Rail crossings Paints **Infill for football/soccer fields**
Base layer Building protection mats **Tire 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 in many different applications.

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Genan rubber products are used in asphalt and bitumen modification; in the sports and leisure segment in e.g. athletic tracks, playgrounds, horse riding arenas and synthetic turf; in industrial rubber products; in new tires; in paints, coatings and adhesives and in plastics.

– The only limit is your imagination!

Regardless of the type of product or compound you work with, the Genan Innovation Department is on hand to offer technical sales support and expertise. Our highly motivated staff is continuously engaged in developing innovative, new applications for high-quality Genan rubber products – and new types of rubber products. A Genan product is a high-quality solution with respect for the environment. Go with Genan – the high-quality solution for your customers.

www.genan.com

