




interzero[®]
zero waste solutions

We manage **plastics** **in a closed loop**

Interzero Plastics Recycling
Sorting – Processing – Trading



“Our vision is
a **world without waste**.
A world worth living in
today and for the
generation of tomorrow.”

Dr. Axel Schweitzer
Chairman

Together for a world without waste

Closing loops, creating added value: As one of the leading service providers for closed-loop solutions, we as Interzero supports our customers in preventing waste, securing raw materials and improving their sustainability balance. Our company's name thereby clarifies the purpose of our company: we are internationally active with our zero waste solutions and call it briefly: Interzero.

Our company has more than 30 years of experience in the development and implementation of needs-based waste management and recycling solutions. Following our foundation in 1991, we initially focused on pioneering work for the recycling of packaging waste. Today, we are innovation

leaders in holistic plastics recycling, and set new standards with sustainable closed-loop solutions. Our vision is a world without waste – with our “zero waste solutions” concept, we contribute actively to climate and resource protection.

Benefit from our long-standing experience, our comprehensive expertise in plastics recycling, and our new ideas for a circular, future-proof economy. Our Interzero Plastics Recycling business unit is your strong partner for sorting, processing, the retail trade and recyclate production – and returns waste plastics to the production loop on a secure and efficient basis.



Interzero Plastics Recycling

Innovative plastics recycling – 360 degrees

The whole of the Interzero Group stands for comprehensive closed-loop solutions. Interzero Plastics Recycling (IPR) stands for expertise in plastics recycling. This business unit bundles highly specialised services and competencies – and is a sought-after contact for efficient, sustainable closed loops for plastic.

From intelligent collection systems and high-tech sorting plants to the production and marketing of quality-tested regranulate and recomounds: As an “innovation leader” in plastics recycling, Interzero Plastics Recycling covers all processes, technologies and consulting services.

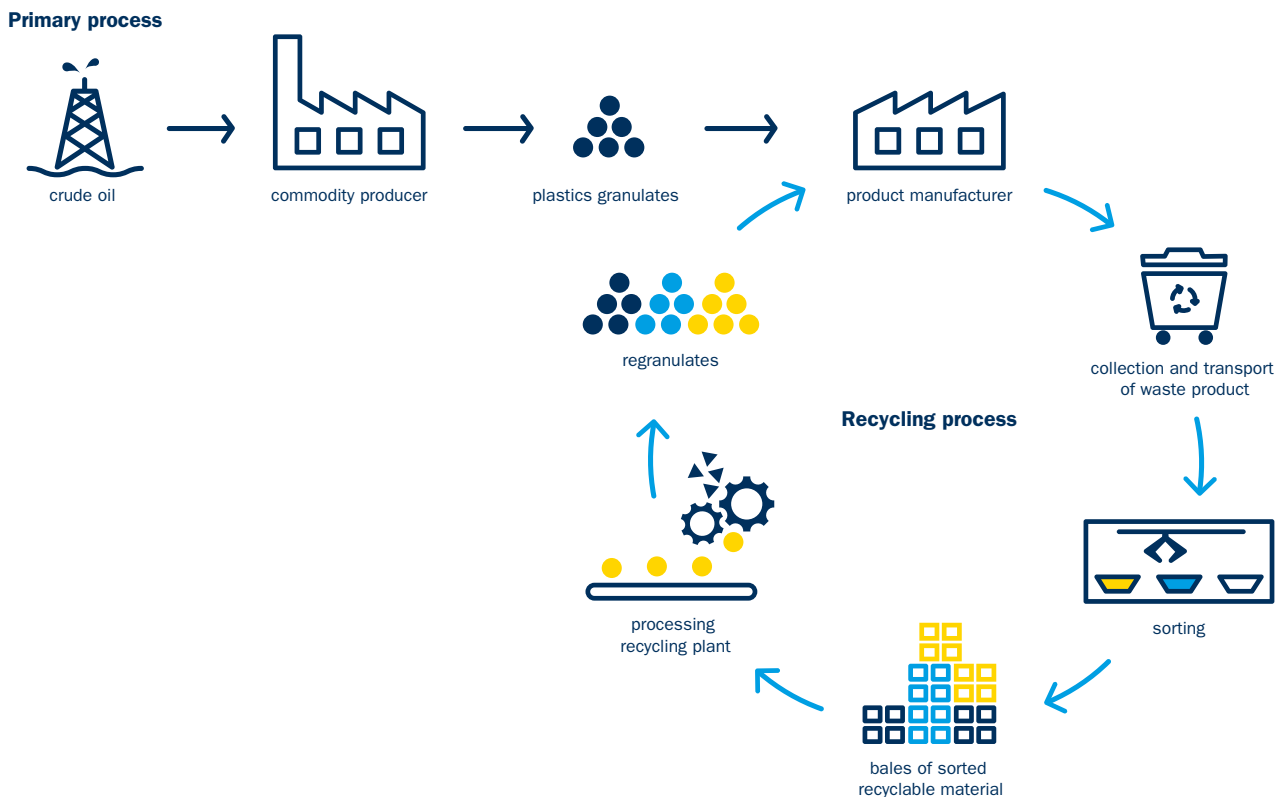
Our range of services encompasses:

- **Collection of high volumes:** Waste plastics from commerce and the waste streams of municipalities are processed by us.

- **Development and operation of sorting and production systems:** Interzero Plastics Recycling is one of the largest sorting companies in Germany.
- **Established processing technologies:** With our own innovative processes, we make tailor-made recyclates and recomounds available for a variety of applications in industry.
- **Marketing of plastic fractions and recyclates:** Our customers benefit from a wide-ranging national and international trading network.
- **Centre of competence for plastics recycling:** For plastics analysis and the changeover of materials to recyclates for products and packaging, our customers can access the know-how of Europe’s only accredited laboratory so far – located in Maribor, Slovenia.



Sorting – Processing – Trading



The big picture

We close loops – for Interzero that means plastics recycling: We offer our customers technologies and infrastructures for the sorting, processing and marketing of recycled plastics.

That's not all, though. In addition to this, at the Interzero Group we also provide access to other popular recycled raw materials and a wide range of services within the scope of the Interzero “zero waste solutions”.

In this respect, our experts in the **Interzero Circular Solutions (ICS)** unit develop tailor-made, sustainable closed-loop solutions – on an analogue and digital basis:

- The organisation of worldwide take-back systems for packaging, products and a wide variety of materials

- The development of individual overall solutions for companies
- Consulting services on waste prevention, and Design for Recycling

Our **Interzero+ dual system** is also an integral part of the overall concept. The innovative offering from this “Recycling Alliance” addresses all companies which not only want to fulfil their legal obligations surrounding packaging licensing, but which are also keen to take responsibility for closing recycling and raw material loops.

The offering is rounded off with innovative digital services and platforms as well as a comprehensive network of service, waste management and recycling partners.

Sorting – Processing – Trading

High-tech on a continuous basis

The first step in our value chain is the **sorting of waste streams**. We invest in the latest sorting technologies on a continuous basis, expand our capacity, and ensure a stable output quality. In this way, we enable the dual systems in Germany to achieve their recycling rates – and **generate raw materials** for the world of industry **according to demand**.





On the basis of established contracts, Interzero Plastics Recycling has access to materials such as PP, HDPE, LDPE, PET and PS from the post-consumer (household and commercial) sector

Interzero Plastics Recycling is the leading supplier of sorting services for lightweight packaging (LWP) and mixed recyclables throughout Europe. Adapted to the requirements of our customers, we process volumes from the collections of the dual systems in Germany and materials from neighbouring European countries. With a total capacity of approximately 800,000 tonnes, we are the largest sorting company for LWP waste in Europe.

Intelligent automation

At our five sorting plants in Germany, we use state-of-the-art digital technologies and drive the automation of processes forward. Among others, at our sorting plants, we also work with near-infrared spectroscopy (NIR): NIR cameras scan between the conveyor belts and distinguish between the different plastic fractions in a split second. This creates groups of substances with a homogeneity of at least 90 percent. In addition to this, the

sorting of LWP already benefits from the use of artificial intelligence and sensor technology. In this respect, Interzero tests sorting robots and uses a deep-learning system which clears disruptive silicone cartridges from the stream of plastics with a high degree of precision.

Access to a wide range of plastics

The goal of our work is to secure the valuable recycled raw materials as efficiently as possible, to further improve the quality, and to support our customers with their fulfilment of the increasingly strict legal requirements. Based on established contracts, Interzero Plastics Recycling has access to materials such as PP, HDPE, LDPE, PET and PS from the post-consumer (household and commercial) sector. Our international activities also help to ensure that the flow of waste plastics does not stop – and that we can secure the sustainable closed-loop circulation of different grades.

More about sorting:

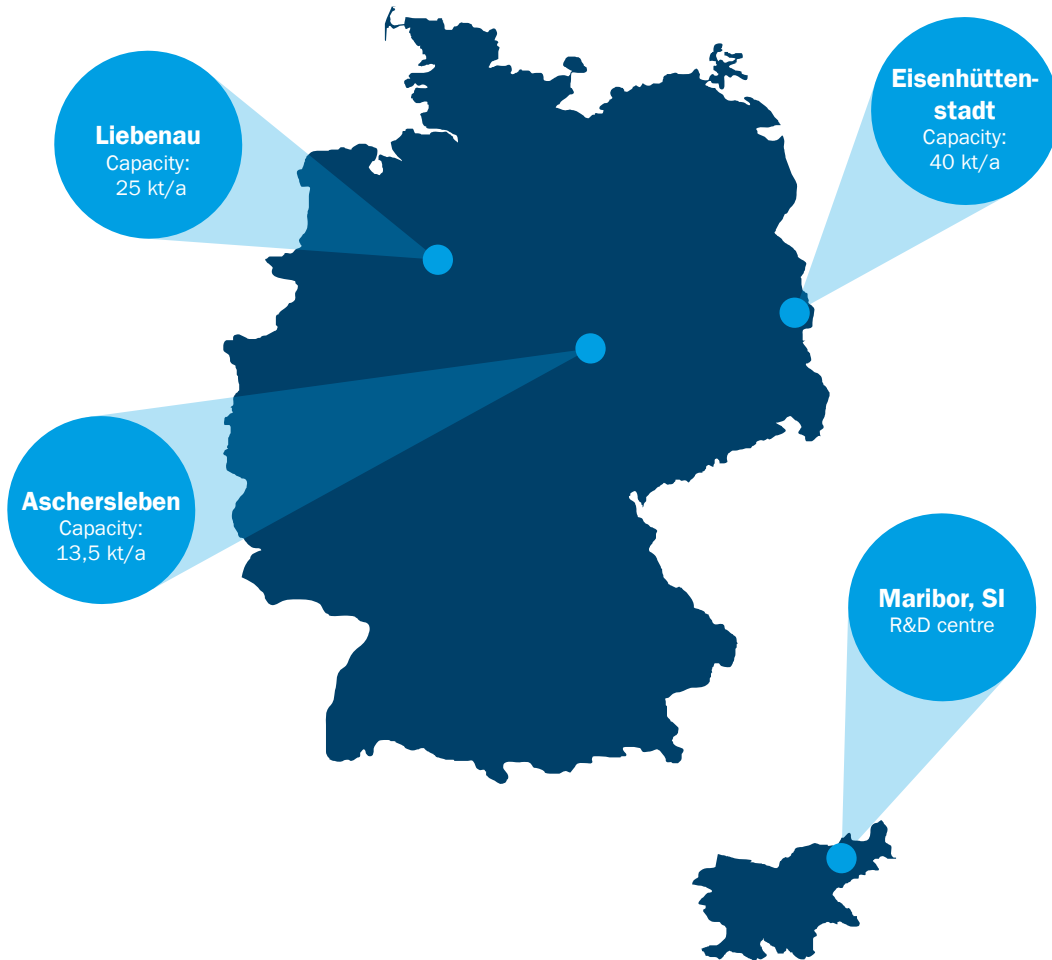


Sorting – **Processing** – Trading

Made-to-measure **processing**

With our own plants and innovative preparation methods, we close the loop for used plastics. From the efficiently sorted materials we create **marketable recyclates**, which are already replacing primary plastics made from crude oil in many areas – and thereby contribute to climate and resource protection.





We are able to provide regranulates and recomponds in specific grades for a wide variety of applications

At our processing plant in Eisenhüttenstadt, using our award-winning process, we manufacture the recycled plastics Recythen and Procyclen. Through the melting and aggregation of the introduced materials, high-quality recycled plastics are created here which can be adapted individually to the requirements of industry. While the plastic grades of HDPE and PP are processed in Eisenhüttenstadt, the plants in Liebenau and Aschersleben specialise in LDPE and PET and/or EPS. This enables us to provide regranulates and recomponds in specific grades for a wide variety of applications.

Wide range of technical applications and specifications

Our recyclates go into use in a wide range of industries. Whether it is non-food packaging, construction applications, household products or the supply chain – Interzero is a reliable partner when it comes to providing sustainable raw materials for plastics-based products. With our experience and our wide-ranging portfolio, we support our customers

with the fulfilment of the specific requirements in their areas of application. We offer melt flow rates between 10-70 (g/10 min), for example as well as Charpy indices of 3-50 (kJ/m²), various colour specifications, and customised formulations through the use of additive compounds.

Leading in Europe: Centre of competence for plastics recycling

New formulations for our recyclates or technical innovations: The innovations which allow us to stand out from the competition are created at the Interzero centre of competence for plastics recycling in Maribor, Slovenia. A clear benefit for our customers: They can access the know-how of our centre of competence and the comprehensive technical facilities for material analysis as well as for the development of innovative, individual plastic recyclates. The laboratory is certified according to EN/ISO 17025 the only recognised research institution in the EU to have specialised in the development and analysis of recycled plastics.

More about preparation:



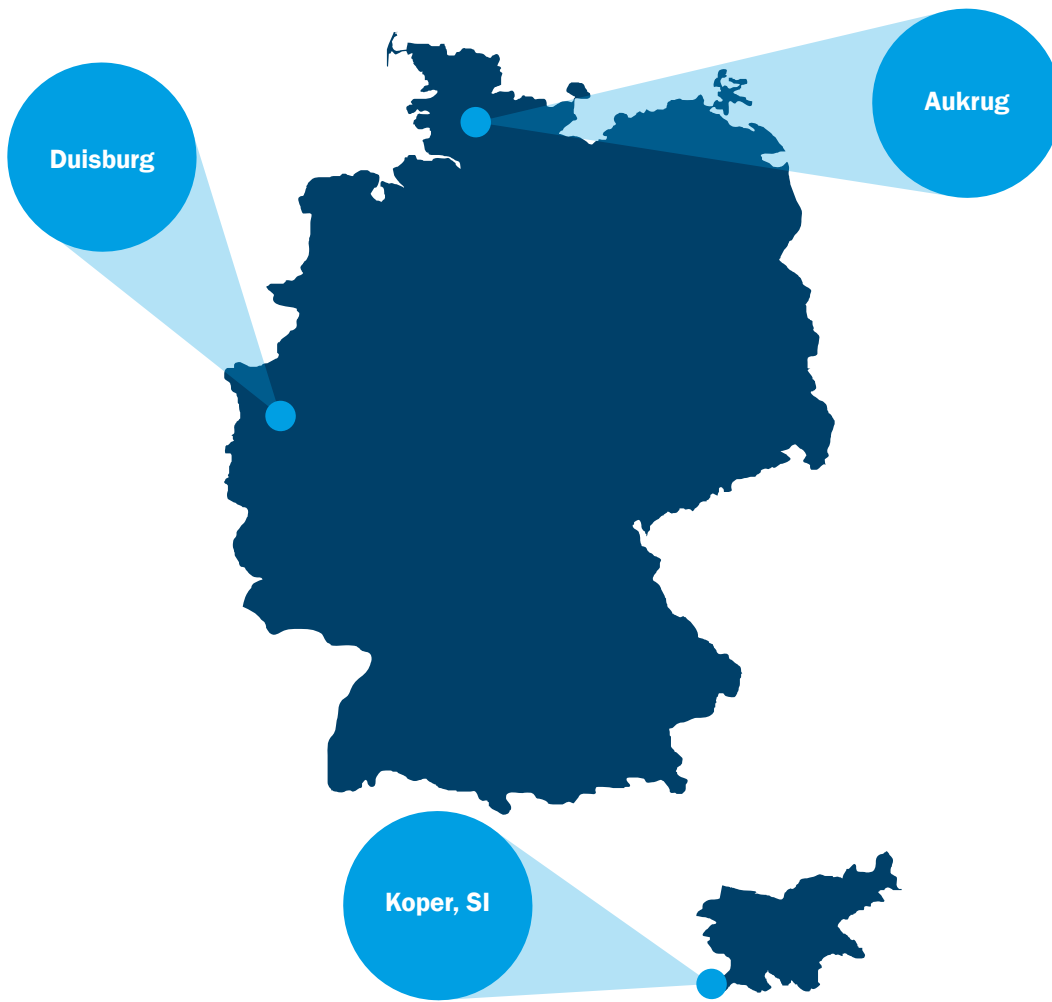
Sorting – Processing – **Trading**

Reliable supplier of recycling raw materials

Best networked in the retail trade for recyclable materials: We have several years of experience in the purchasing and distribution **of all waste streams** in the sector plastics. This means we can offer our customers genuine added value – and support the industry in reducing the dependence on fossil resources.

More about recyclables
trading:





Whether it is lightweight packaging, styrene, rigid plastics or other types of plastic waste: You can be certain to rely on the IPR retail specialists and their global distribution network. They secure the necessary volumes from the waste streams for our production locations as well as the production of the recyclates. In this way, they create the basis for supplying our customers with high-quality and needs-based recycled materials.

Availability in consistent quality

Our aspiration: We supply the necessary materials as required and “in time”. We ensure the availability of our products in consistent qualities through our long-term relationships with leading stakeholders in the food retail trade and the recycling industry.

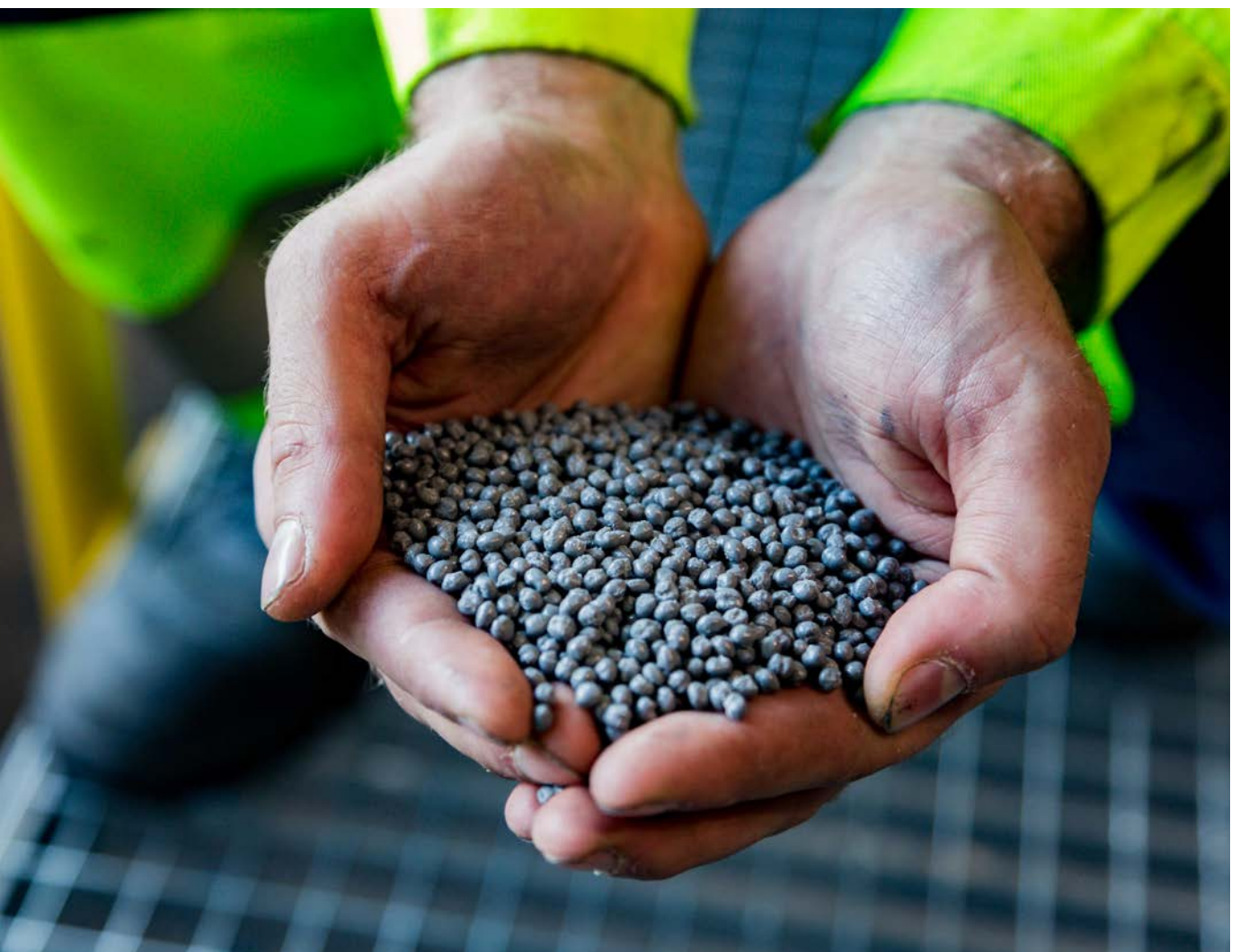
As reliable partners in the value chain for plastics, we think beyond the boundaries of conventional waste management – and use our know-how to close plastic loops more effectively for the benefit of both businesses and the environment.



Products

The full range – for your requirements

Whether it is bale goods, palletised plastic types from the post-consumer commercial sector, or regranulate and recompounds: We offer a **wide product range of recycled plastics** in a variety of different fractions and specifications.



In our products, we generally distinguish between the “post-consumer commercial (PCR-C)” and “post-consumer household (PCR-H)” grades. In the category of PCR-C, we group together all of the grades from industrial feed-in (production of household goods); PCR-H consists of waste streams from private households (yellow bag/yellow bin) as well as “post-industrial” streams sourced from industrial partners.

Whether you require bales or granulate, processed waste from private households or from industrial streams: Interzero Plastics Recycling is a competent partner to the processing industry – and develops its product range according to the market requirements on a continuous basis. We can already able to serve both extrusion and injection moulding applications, as well as blow moulding applications.

We have prepared a simplified overview of our product range together for you below.

Detailed information is available on our website. Our experts will also be happy to answer any questions you may have about sustainable and customised recycling and closed-loop management.



Polymer group	Material	Grade*	Packaging type
LDPE	LDPE film (98/02 – 50/50)	PCR-C	In bales
	LDPE film (DKR 310-0)	PCR-H	In bales
	LDPE regranulate (CPE)	PIR	Palletised
	LDPE regranulate	PCR-C	Palletised
PP	PP (different varieties)	PCR-C	In bales
	PP film reel	PIR	Palletised
	PP regranulate (different types)	PCR-C	Palletised
	recythen®	PCR-H	Palletised
	procyklen®	PCR-H	Palletised
	PP film	PCR-H	In bales
	PP rigid	PCR-H	In bales
	PP black	PCR-H	In bales
HDPE	HDPE hollow containers and drums	PCR-C & PCR-H	In bales
	HDPE rigid	PCR-C	In bales
	HDPE regranulate (different types)	PCR-H	Palletised
	recythen®	PCR-H	Palletised
EPS	PS (different specifications)	PCR-C	Palletised
	PS regranulate	PIR	Palletised
	PS planters	PCR-C	In bales
	PS bowls clean	PCR-C	In bales
PET	PS	PCR-H	In bales
	PET strapping	PCR-C	In bales
	PET bottles	PCR-H	In bales
	PET flakes	PCR-H	Palletised
	rPET (PET regranulate)	PCR-H	Palletised
	Mixed PET 80/20	PCR-H	In bales
Other	PET blister	PCR-H	In bales
	Tetra, PPK, tinplate	PCR-H	In bales

*PCR-C = Post Consumer Recyclate-Commercial / PCR-H: Post Consumer Recyclate-Household / PIR: Post Industrial Recyclate

You can find an overview of our products here:



Sustainability

How **recyclates** help **reduce** your **carbon footprint**

Recycling plastics conserves natural resources, and has been proven to help save climate-damaging greenhouse gases. This relieves the burden on our planet – and improves our customers' sustainability balance.

For 15 years, the Fraunhofer Institute for Environmental, Safety and Energy Technology UMSICHT has been investigating the impact of the recycling activities of Interzero on the use of resources – and the extent to which the closed-loop circulation of recyclable materials reduces emissions of climate-damaging greenhouse gases.

The use of the recycled plastic Procyclen alone, which is manufactured by Interzero, saves an average of 1,002 kg of greenhouse gases per tonne in comparison with primary plastics made from crude oil. That is equivalent to 56 percent fewer climate-damaging emissions. At the same time, the consumption of primary energy per tonne of regranulate falls by approximately 21,000 kWh – equivalent to using a household washing machine 14,133 times.

Sustainability – your competitive advantage

Make use of the ecological advantages of our recycled plastics as your sustainable competitive advantage: Together with Interzero, you improve your ecological footprint and strengthen your relations with your customers. We can demonstrate the amount of primary raw materials and greenhouse gases that you save with us in your individual resource protection certificate.

Interzero also arranges for the quality of its solutions and products to be checked and confirmed by independent organisations on a regular basis.

More about sustainability:



Certified as secure and sustainable




eucertplast

Quality and continuity with the production of recyclates is a key element for Interzero, which means that the individual companies and locations are certified at regular intervals. In addition to the site-specific EuCertPlast certification,

we also hold the standard IMS certifications within the Interzero Group. We also review the extension of our certification at regular intervals, to ensure that we fulfil the latest quality requirements at all times.





Would you like to learn more about the solutions and products of Interzero Plastics Recycling? Talk to us. We will be pleased to advise you and support you on your journey to a more sustainable future – to a world without waste.

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