



Beocycle
**rotomoulding
powders**



The 17 interconnected 'Sustainable Development Goals' are a blueprint to reach a sustainable future for us all.

Beologic actively pursuits the following sustainability goals:

Reduced waste generation
Efficient use of natural resources



Reduced greenhouse gas emissions
Carbon-neutral organization and products

Increasing demand for sustainable raw materials.

The increasing demand for sustainable raw materials reflects a growing awareness of the environmental and ethical implications of resource extraction. As consumers and industries prioritize sustainability, there's a shift towards responsibly sourced materials that minimize ecological harm and support fair labor practices. This demand is driven by regulations which are resulting from concerns over climate change, deforestation, and social responsibility, leading to a push for materials like recycled plastics, certified wood, and ethically sourced minerals.

Green Deal

The European Green Deal is a set of policies from the European Commission, aimed at the goal of making Europe fully climate neutral by 2050, making it the first continent to operate climate neutral. By 2030, the target is to reduce CO2 emissions by 55% compared to 1990 levels.

Plastic taxes

Governments around the world recognize the urgent need to address plastic pollution, and as a result, we can see more stringent taxation policies aimed at reducing the production and use of single-use plastics. These taxes are likely to incentive manufacturers to invest in eco-friendly alternatives and recycling technologies.

Packaging & Packaging Waste Directions become Regulation

Recycled plastic will gradually replace virgin plastic in packaging production. By 2030, EU plastic packaging must contain 30-35% recycled content, increasing to 50-65% by 2040. Consequently, the EU's plastic packaging is expected to contain more recycled plastic than virgin plastic by 2040.

Waste Shipment Regulation

The European Commission made a proposal to reform the EU rules on waste shipments, laying down procedures and control measures for the shipment of waste, depending on its origin, destination and transport route, the type of waste shipped and the type of waste treatment applied. The aim is to ensure that the EU does not export its waste challenges to third countries and support a clean and circular economy.

How do we achieve sustainable powders?

01

We produce compounds with a lower carbon footprint than virgin plastic

Decarbonize

- Did you know that in the plastic industry 80% of emissions stem from raw materials?
- All our products come with a calculated cradle-to-gate carbon footprint
- Our PCF's are calculated in accordance with PAS 2050 and the GHG product standard
- Increasing the recycled content reduces carbon emissions

02

We give end-of-life products a second life

Environmental health

- No burning of end-of-life products
- Waste doesn't end up in our oceans or lands
- Cleaner processes using 100% green energy avoids carbon emissions
- Prevent wildlife from ingesting or becoming entangled in plastic waste

03

We encourage local cooperations

Social impact

- Nordic fishermen can return their end-of-life maritime gear
- Collection boxes across Europe are available to deposit all your synthetic wine corks
- Farmers have a solution for their nets and bindery
- Artificial sports fields are recycled and given a new life
- Clothing brands can recover part of their waste

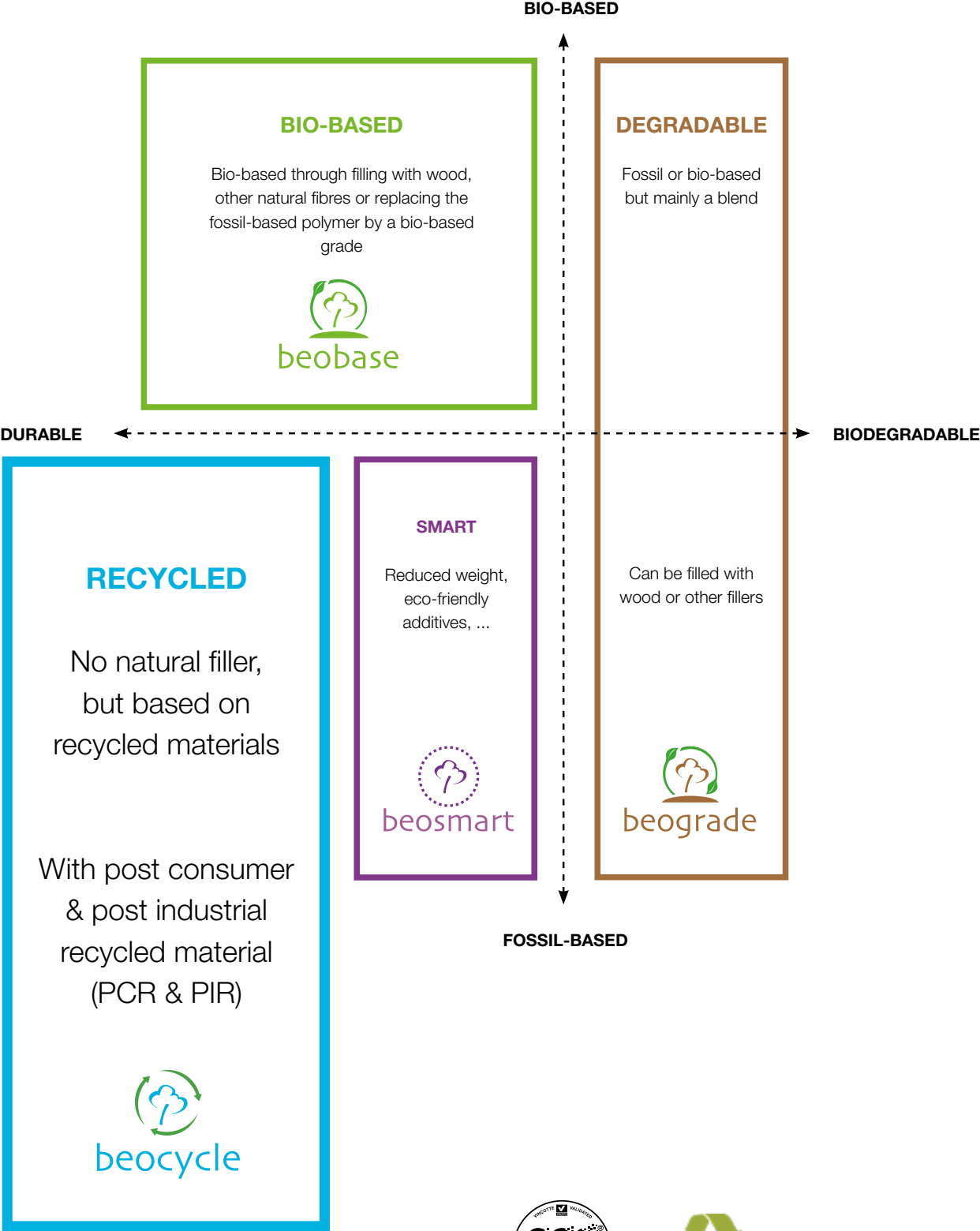
04

We help the plastic industry to close the loop

Circular material use

- Reduced extraction of natural resources
- Existing resources are kept in the economic loop
- Plastic waste is reduced

A logical product range.





Our sources :

Ocean

These materials do not end up in our oceans any longer, but are given a new life through recycling and re-using. Beologic will prevent more than 215.000 kg of ocean waste in 2023, by providing existing clients with ocean compounds. The compounds based on end-of-life fishing gear have a dark green color that can vary from batch to batch. This can be a challenge for end products, but also an opportunity to communicate to end users.

Turf



15-20 years ago, the sports fields industry came up with an innovation. Artificial turf was widely adopted. Today, these sports fields are worn out and the industry is facing the challenge to recuperate and recycle them. Our partner recycles up to 1.000 sports fields annually. This translates into 220.000 tons of waste of which 11.000 tons is artificial yarns. Beologic is closely cooperating with them to give the fibrous material a new life in our compounds and your products.

The compounds based on post consumer artificial turf have an intense (dark) green color that can vary from batch to batch. This can be a challenge for end products, but also an opportunity to communicate to end users. Additionally, we have a post industrial waste stream available, originating from cut offs and left over yarn bobbins in production. These compounds have a lighter and more stable green color and a very high UV resistance.



Agri

Each year an estimated 12.5 million tons of plastic products are used in agricultural applications in Europe. Among these products are agricultural nets and bindery such as the dutch "Tulpennetten". Did you know that on average 3 ha of these nets are needed for the production of 1T of recycled plastic? It takes goodwill from the agricultural industry to collect these materials. There are already some great initiatives e.g. in France, Germany and the Netherlands to help farmers with this. These cooperation's are extremely important to avoid the agricultural plastic waste of ending up in soils on farmlands, which today contain even more micro plastics than our oceans. A big advantage of this waste stream is the close to natural look. This makes it possible to produce tailor made colors that can maintain the brand feeling of your products.



Caps & closures

Over the past 8 years, our partner Vinventions has put a tremendous effort in setting up a recycling program for synthetic wine closures. The supply chain works with several caritative associations such as France Cancer and Agir Cancer Gironde, so part of the profit goes to cancer research. Beologic has given a second life to 6.8 million wine closures over the past 12 months, that is one for every person in Flanders! The resulting recycled powder can give mechanical flexibility to a rotomoulding product as well as a nice visual aspect.



Collect

To put it mildly the textile industry has quite the carbon footprint. With an annual production of 80 to 100 billion new garments, a waste mountain of 92 million tons of plastic is associated. In an effort to make this mountain smaller, we use recycled covers, which are used during transport to protect the clothing. With a newly launched project Beologic forecasts to use 120.000kg recycled covers in 2024. This stream also has a close to natural look which makes it possible to produce tailor made colors that can maintain the brand feeling of your products.



Our powders :

“In recent years, there has been a noticeable shift in consumer behavior. Despite the ‘Green Premium’ of sustainable goods, people are inclined to choose products that come with a meaningful back-story.”

33%
recycled
content



With the materials that contain 33% recycled content, you are ready for the future and ready for the changes in European and national legislation. These rotational moulding powders ensure a stable production process and have excellent characteristics. They are designed for customers who are looking to have a seamless transition from virgin materials into recycled content.

	Article Number	MFR (190°C/2,16 kg)	Relative density	Carbon footprint	Tensile strength at Yield	Flexural modulus	Charpy impact strength notched (1eA)	Vicat softening point (B120)	Post Consumer recycled content (PCR)	Post Industrial recycled content (PIR)
UNIT		g/10 min	g/cm ³	kg CO2 eq/kg	MPa	MPa	kJ/m ²	°C	-	-
STANDARD		ISO 1133-1	ISO 1183-1	PAS 2050	ISO 527-1	ISO 178	ISO 179-1	ISO 306	✓	✓
Beocycle PE RTM249 Collect	9802100249	5,0	0,931	1,802	13,6	352,2	64,0	53,8		✓
Beocycle PE RTM250 Art. Grass	9802100250	5,3	0,935	1,670	14,3	426,6	31,9	57,9		✓
Beocycle PE RTM251 Closures	9802100251	5,8	0,933	1,455	12,7	342,9	23,5	49,8		✓
Beocycle PE RTM252 Collect	9802100252	4,9	0,931	1,802	13,3	370,2	26,9	56,0	✓	
Beocycle PE RTM253 Agri	9802100253	3,2	0,939	1,680	17,4	556,0	14,2	66,2	✓	
Beocycle PE RTM254 Ocean	9802100254	2,8	0,939	1,476	10,8	615,5	12,2	67,6	✓	
Beocycle PE RTM255 Closures	9802100255	5,8	0,933	1,582	12,6	343,0	23,4	49,8	✓	
Beocycle PE RTM256 Art.Grass	9802100256	4,6	0,963	1,802	15,6	567,5	6,7	62,6	✓	
Beocycle PE RTM257 Agri	9802100257	2,9	0,939	1,696	16,9	547,8	14,3	65,6	✓	



33% recycled content



UV resistant



recyclable at end of life



low carbon footprint



easy processing

A beach scene with two blue containers, a green net, and a plant with purple flowers. The background shows a sandy beach, the ocean, and a clear sky. In the foreground, there are two blue, rounded containers on the sand. To the left, a green fishing net is partially visible. To the right, a green plant with small purple flowers is growing. The overall scene is bright and sunny.

50%
recycled
content

Transforming end-of-life fishing gear into beach treasures!

The materials that contain 50% recycled content are the next step on the ladder to change certain products into more sustainable variants. Replacing half of the virgin material with recycled content makes these powders more sustainable while maintaining their excellent technical properties. This material is designed for easy processing, however very technical parts may require attention



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UNIT STANDARD		g/10 min ISO 1133-1	g/cm ³ ISO 1183-1	kg CO2 eq/kg PAS 2050	MPa ISO 527-1	MPa ISO 178	kJ/m ² ISO 179-1	°C ISO 306	✓	✓
Beocycle PE RTM258 Collect	9802100258	4,3	0,930	1,633	12,3	298,9	70,6	50,8		✓
Beocycle PE RTM259 Art. Grass	9802100259	4,7	0,938	1,434	13,7	385,0	42,8	56,3		✓
Beocycle PE RTM260 Closures	9802100260	5,5	0,928	1,107	10,9	269,5	46,4	40,9		✓
Beocycle PE RTM261 Collect	9802100261	3,6	0,925	1,633	13,1	364,9	35,0	52,9	✓	
Beocycle PE RTM262 Agri	9802100262	2,2	0,940	1,448	18,9	656,5	14,2	73,5	✓	
Beocycle PE RTM263 Ocean	9802100263	2,2	0,942	1,139	18,3	626,7	11,8	70,1	✓	
Beocycle PE RTM264 Closures	9802100264	5,5	0,928	1,300	10,8	269,6	46,3	40,9	✓	
Beocycle PE RTM265 Art. Grass	9802100265	3,4	0,986	1,633	16,8	612,5	5,8	60,6	✓	
Beocycle PE RTM266 Agri	9802100266	1,9	0,941	1,473	17,5	602,9	13,7	67,5	✓	



50% recycled content



UV resistant



recyclable at end of life



lower carbon footprint



medium processing



66%
recycled
content

“Artificial grass sports fields have become a common sight. However, as these fields reach the end of their lifespan, disposing them responsibly has presented a unique challenge. Rather than sending them to incineration, they are carefully removed separating the various materials, and then recycled into usable compounds.”

Our materials with 66% recycled content are designed to fill in the gap between the accessible materials and the ideal world of 100% recycled content. These materials are the best compromise between technical performance, low carbon footprint and an attractive, eco-friendly product.

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UNIT STANDARD		g/10 min ISO 1133-1	g/cm ³ ISO 1183-1	kg CO2 eq/kg PAS 2050	MPa ISO 527-1	MPa ISO 178	kJ/m ² ISO 179-1	°C ISO 306	✓	✓
Beocycle PE RTM267 Collect	9802100267	3	0,929	1,474	13,3	291,4	67,8	48,5	✓	✓
Beocycle PE RTM268 Ocean	9802100268	2,5	0,943	1,017	16,8	526,1	17,3	63,1	✓	✓
Beocycle PE RTM269 Art. Grass	9802100269	3,3	0,970	1,343	15,4	481,3	10,3	57,8	✓	✓
Beocycle PE RTM270 Closures	9802100270	5,5	0,932	0,908	9,5	209,6	54,8	36,3	✓	✓
Beocycle PE RTM271 Agri	9802100271	2,1	0,935	1,352	15,4	479,4	24,7	56,9	✓	✓
Beocycle PE RTM272 Collect	9802100272	3,8	0,930	1,474	12,1	283,0	76,7	48,1		✓
Beocycle PE RTM273 Art. Grass	9802100273	4,1	0,938	1,212	12,9	368,1	61,1	56,9		✓
Beocycle PE RTM274 Collect	9802100274	4,5	0,927	1,474	12,3	332,9	38,6	53,5	✓	
Beocycle PE RTM275 Agri	9802100275	1,5	0,942	1,230	18,3	637,6	14,6	68,6	✓	
Beocycle PE RTM276 Ocean	9802100276	1,7	0,945	0,822	20,2	719,6	12,7	70,3	✓	
Beocycle PE RTM277 Art. Grass	9802100277	2,6	0,974	1,474	15,7	654,5	5,1	60,8	✓	
Beocycle PE RTM278 Closures	9802100278	5,5	0,932	1,035	9,5	209,7	54,7	36,4	✓	



66%
recycled
content



UV
resistant



recyclable
at end of life



lower carbon
footprint

“The possibility to give a lifetime guarantee on flower pots, results in an endless reuse and recycle loop, confirming the narrative and providing the consumer to take an active part in the story of the product and all its separate parts.”

You might think, why not go for 100% recycled content? Well, due to the nature of the rotational moulding process, working with recycled materials can sometimes be a bit more challenging. However, it should be the goal of everyone to pursue products that are more sustainable and have a minimal carbon footprint. This approach not only results in an attractive and eco-friendly product, but also provides a compelling story to share with your customers.



100%*
recycled
content

** Materials contain minimum 95% recycled content*

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UNIT STANDARD		g/10 min ISO 1133-1	g/cm ³ ISO 1183-1	kg CO2 eq/kg PAS 2050	MPa ISO 527-1	MPa ISO 178	kJ/m ² ISO 179-1	°C ISO 306	-	-
Beocycle PE RTM279 Collect	9802100279	1,8	0,922	1,177	11,5	278,6	72	46,8	✓	
Beocycle PE RTM280 Agri	9802100280	0,8	0,949	0,822	22,0	752,6	18,9	73,8	✓	
Beocycle PE RTM281 Art. Grass	9802100281	1,3	1.007	1,177	17,0	682,0	5,4	59,5	✓	
Beocycle PE RTM282 Ocean	9802100282	1,9	0,946	0,572	14,8	500,1	24,2	59,8	✓	✓
Beocycle PE RTM283 Agri	9802100283	1,2	0,936	1,059	14,3	401,8	71,1	51,0	✓	✓
Beocycle PE RTM284 Collect	9802100284	2,1	0,923	1,177	11,9	247,4	65,3	40,8	✓	✓
Beocycle PE RTM285 Collect	9802100285	3,7	0,924	1,177	11,1	204,5	71,2	40,6		✓
Beocycle PE RTM286 Art. Grass	9802100286	3,1	0,941	0,753	17,4	311,5	72,7	52,3		✓



100% recycled content



UV resistant



recyclable at end of life



lower carbon footprint



Foams

“Product development these days involves innovative thinking. Incorporating foam materials not only reduces weight but also conserves precious raw materials. This forward-looking approach ensures both efficiency and environmental responsibility in product design.”

To reduce the carbon footprint of your product, you can either reduce the carbon footprint of your raw materials by using recycled content, or you can make the product lighter by integrating foams. Here we do both with our foam grades based on recycled materials. Beologic will assist you to select the correct foam grade based on the needs of your product.



Custom made powders

Didn't find what you need? Our engineers create custom-made powders to meet your specific material characteristics. We create your vision into a product and we will also guide you with production set up. We develop not only materials, but we also help with the entire production process. Our goal is to find the optimal balance between functional and visible properties.





**SUSTAINABLE
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