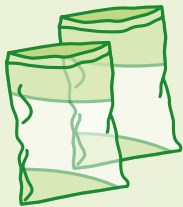


Ecoo Beringen: PE film-to-film recycling

Biostoom
Beringen

ecoo
Rethinking plastics

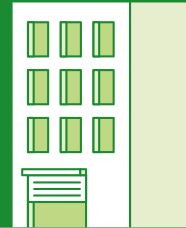
📍 Industrieweg 172, gate 2068, 3583 Beringen



PE film

PE film-to-film recycling: recycling household plastics to produce regranulate for blown film applications, rubbish bags or packaging film

Capacity



42kT /year,
including 25kT via
the New Blue Bag

30
new jobs



Investment
of
€ 42
million



Partners: Ecoo

Ecoo has 30 years' experience in recycling mixed household plastic. We close the loop by recycling post-consumer plastics as cost-effectively and ecologically as possible to make secondary raw materials and products. In this way, we ensure every citizen that the sorting efforts they make at home actively contribute to the circular economy.

www.ecoo.eu/en



Works

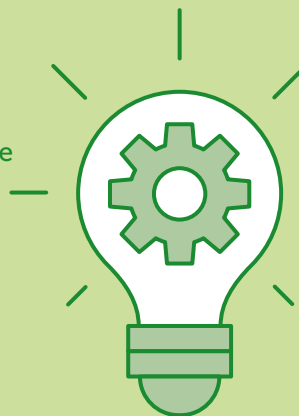
APRIL
2021

DECEMBER
2021

Fully operational
as of April 2022

Innovation

- Three high-tech mechanical recycling lines
- AI monitoring system in real time
- Digital platform with in-line quality management for the international standardisation of r-LDPE
- High degree of purity for good-quality recycle



Partners: Biostoom Beringen

Biostoom Beringen operates the new Biostoom plant, whose production is based on the incineration of non-hazardous and non-recyclable waste. This high-grade steam is then optimally exploited through dynamic heat generation and efficient conversion into electricity. Biostoom Beringen is a subsidiary of Bionerga nv. The Bionerga nv shareholders are Limburg.net and Nuhma cvbva.

www.biostoomberingen.be

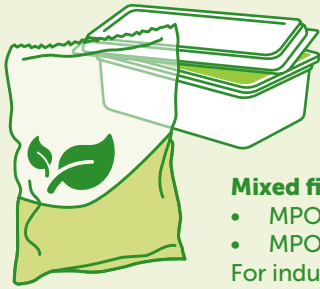
The better we sort, the more we recycle

Fostplus

Ecoo Houthalen-Helchteren: mixed plastic recycling plant



📍 Europark 1075, 3530 Houthalen-Helchteren



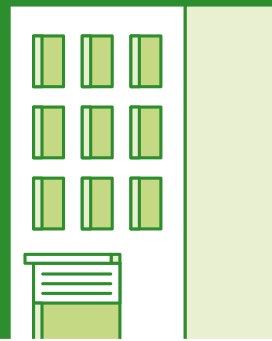
Mixed plastics: MPO & other films

- Mixed film & MPO plastics recycled into:**
- MPO regranulate – 400 to 2000 micron
 - MPO agglomerate & regrind
- For industrial applications

Capacity

35kT /Year,

including 16,8kT via the New Blue Bag



11

new hires for the site in Houthalen-Helchteren



Investment

€10,5 million



New line:

JULY 2020

NOVEMBER 2020

Fully operational by January 2021

Compounder:

JUNE 2021

MARCH 2022

Partners

Ecoo has 30 years of experience in the recycling of mixed household plastics. By recycling residual plastics in the most eco-efficient and cost-conscious way into valuable secondary raw materials and products, we close the loop and guarantee every citizen that their sorting efforts at home actively contribute to the circular economy. Ecoo has factories in Houthalen and Laakdal. The Group's mechanical recycling has a 97 % output of raw materials.



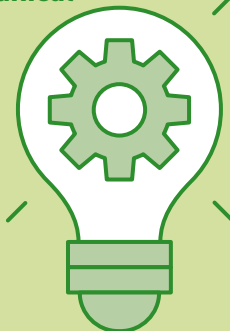
www.ecoo.eu/en

The investments not only allow for an increase in capacity but also a diversification into new types of raw material. Due to the higher level of purification of the recycled pellets, the number of potential applications grows exponentially.

Process and innovation

State-of-the-art fully digitalised mechanical recycling, including

- Double Near Infrared (NIR) for the separation of off-spec materials
- Innovative sink-float separation to bring extrinsic contamination down from 1000 ppm to 20 ppm
- Full stream 2-stage flotation system to recycle closed-loop process water
- Data collection to allow for higher traceability and quality management



The better we sort, the more we recycle



FILAO: a new SUEZ-Sources ALMA PET recycling plant in Belgium



📍 rue du Déversoir, 6010 Couillet



PET bottles

Food grade r-PET for bottle-to-bottle applications, from the Belgian customers to the Belgian retail market, with 51 to 100 % recycled content.



Capacity

40kT /Year,
including 33kT via
the New Blue Bag

approx.

40

new hires
for the site in
Couillet



investment

about

**€40
million**



Start of
construction

**OCTOBER
2021**

End of
construction

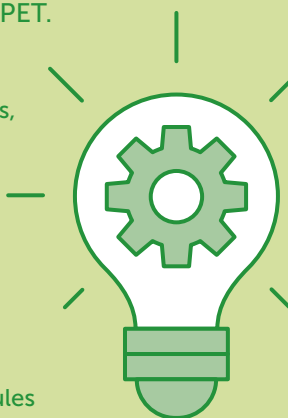
**DECEMBER
2022**

Process and innovation

100 % circularity in the production of food grade r-PET with a similar quality as virgin PET.

Recycling process :

1. Mechanical sorting to clear out labels, caps and other impurities
2. Washing to clean out any food residue or other
3. Different grinding steps
4. Thermal and mechanical drying
5. Screening
6. Granulation into flakes or spangles
7. Extrusion into pellets
8. Polycondensation of the PET molecules to ensure food grade quality



The Couillet site is made available to the project by the inter-municipality TIBI in the form of a long-term lease.

Partners



SUEZ Group offers innovative and resilient solutions for water management, waste recovery, soil decontamination and air treatment. SUEZ Recycling and Recovery Belgium serves both businesses and citizens. In addition, the Group operates 34 packaging sorting plants around the world, and operates different plastics recycling plants in order to help its industrial customers produce circular packaging. On the horizon of its strategic plan, SUEZ Group aims for 100 % sustainable solutions with a positive impact on the environment, health and climate.

<https://www.suez.com/en>

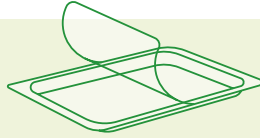
Sources ALMA is a European family company. It offers healthy and safe hydration thanks to its high quality spring and mineral waters. Active in the bottling of water and non-alcoholic drinks at 45 production sites in Europe, Sources ALMA is the leading player in volume on the French and Belgian bottled water market, with a diversified brand portfolio. Since the beginning of its history, Sources ALMA has reduced its environmental footprint in particular by decreasing the weight of its bottles, and by effectively networking its production sites and optimizing its transport. Since 2009, Sources ALMA integrates its own r-PET in its PET bottles.

<https://www.sources-alma.com/en/>

This first Belgian PET recycling plant, FILAO, allows SUEZ to strengthen its position in Belgium: SUEZ participates in the whole value chain, from eco-design, collection and sorting to recycling. Sources ALMA will reintroduce the produced r-PET into the Belgian market through its own brands, with newly recycled water bottles. It is a real Belgian circular story.

MOPET België B.V., a part of Morssinkhof Rymoplast Group

📍 Allée du Centre Ardenne, 6840 Neufchâteau



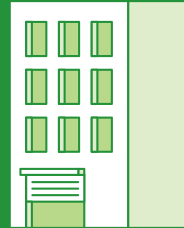
PET trays & PET bottles

- The recycling of PET trays into granulate, chiefly with a view to the production of new trays (tray-to-tray)
- The recycling of transparent and opaque PET bottles, of which an important part is bottle-to-bottle recycling
- 95 % of the tonnages delivered by Fost Plus are again intended for the Belgian market

Capacity

40.000 T

of which 28.000 T
via Fost Plus



Number of hires



50 FTE

in the first phase

Investment



€ 30
million

Start of
construction

**IN THE COURSE OF
2022**

Operational
as of

**DECEMBER
2023**

About Morssinkhof Rymoplast Group

The Morssinkhof Rymoplast Group family business was founded in 1961 and has since then been playing a leading role in the European plastic recycling industry. The Group has 10 processing plants in Europe, each with its own specialism. It produces 350,000 tonnes secondary raw materials annually out of post-consumer and post-industrial plastics.

The core business focuses on the recycling process of five different plastic types: HDPE, LDPE, PET, PS and PP. Morssinkhof has more than 20 years' experience in the production of food grade PET granulate for the production of new bottles for the food industry. The Group consists of two business units: Rymoplast and Morssinkhof Plastics.

The Neufchâteau site is part of the business park Ardenne Logistics of IDELUX in the province of Luxembourg.

Innovation

- Among the European precursors for efficient recycling of monolayer PET trays on a large scale
- Important engagement to applications for pellets from multilayer PET trays
- First Belgian recycler that processes opaque PET bottles (15th PMD faction as of 01/01/2023) with a view to bottle-to-bottle recycling
- Lot on option for the expansion of the activities to CuRe Technology: an advanced "enhanced" recycling process that removes colouring and additives from PET, so that it can be reused as secondary raw materials



Recycling process for PET

- Post-sorting at item level to optimise the quality of secondary raw materials
- Milling, cold and hot washing on separate processing lines
- Regranulation and post-condensation of all the hot washed PET flakes into granulate