Digital Product Passport Implementation

RFID Forum 2025

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ecopolplast
Shaping tomorrow's sustainability with Ecoplastomer®
Digital Product Passport Implementation
RFID Forum, Prague, 23-24 June 2025
discover

About

Technology creator

At Ecopolplast we reinvent the use of recycled materials in manufacturing.

We aimed to create a solution that allows for the reuse of plastic and old tyres in manufacturing, and we succeeded.



Photo from the ceremonial launch of the Ecoplastomers pilot production line in Gdynia, Poland

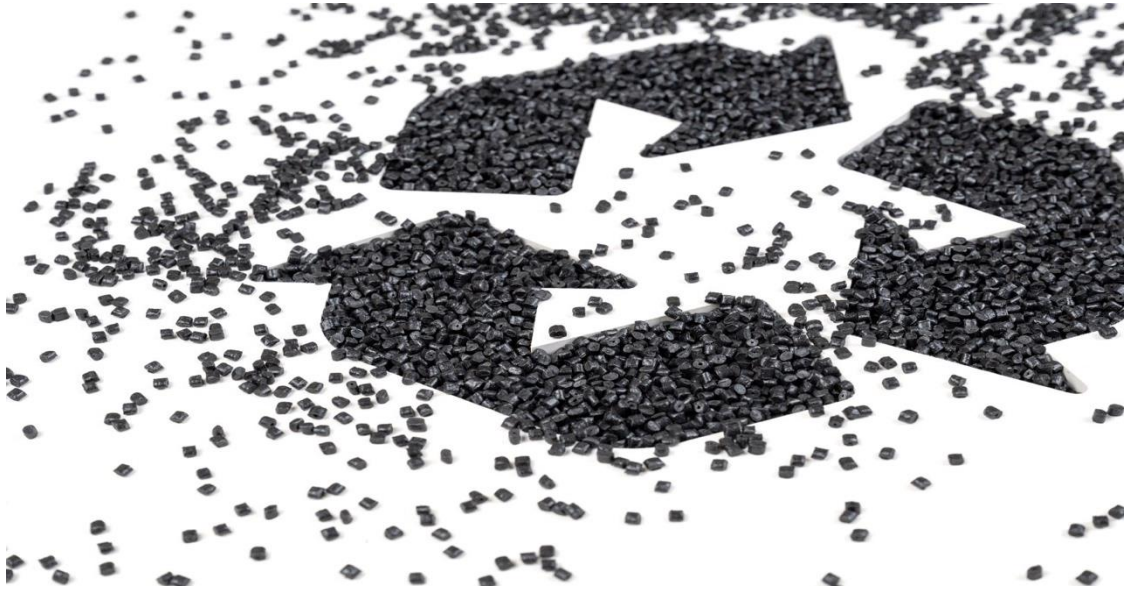
Solution

Ecoplastomer® circular
100% recycled content thermoplastics

Ecoplastomers are first-of-their-kind circular thermoplastics made only from

- post-consumer recycled plastic and
- Recycled tyre rubber or recycled EPDM rubber.

By ensuring complete independence from crude oil we significantly reduce environmental and CO2 impact.

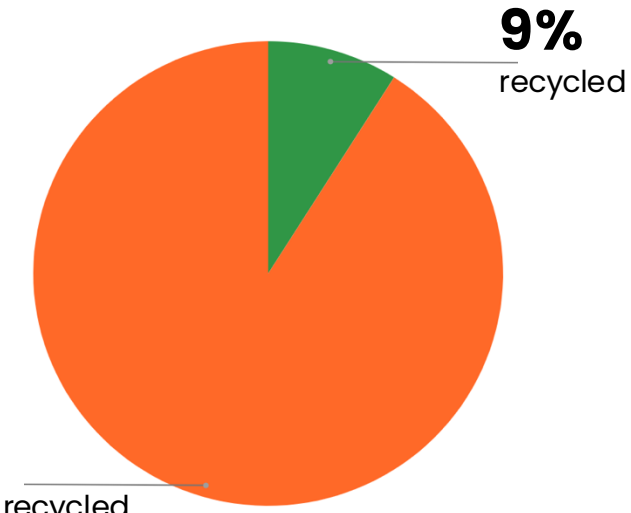


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Facing Global Challenges:
Escalating Waste Pollution and Crude Oil Dependency

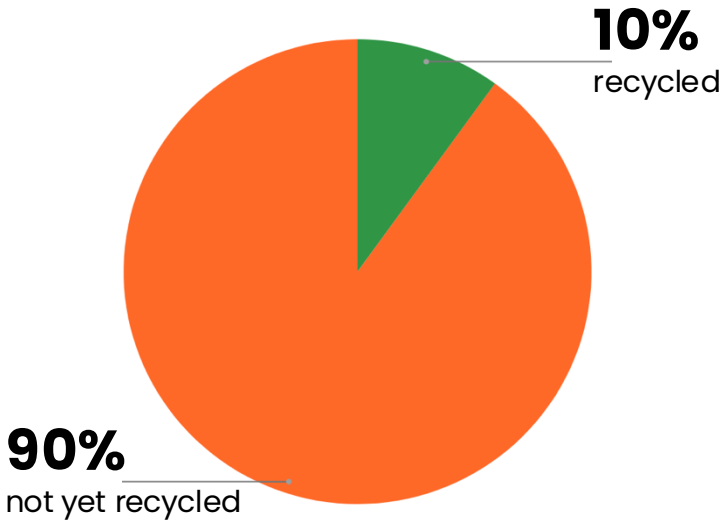
Plastic

400 million tons end up in landfills each year



Tyres

1 billion are dumped yearly



Effect

- By 2050, 15% of global CO2 will come from plastic manufacturing.
- Increasing environmental pollution.
- Non-decomposing tyres release toxins in landfills.
- Reliance on critical raw materials (Oil) causing Earth erosion.

Ecoplastomer® applications













Why is Ecoplastomer® a better choice over traditional thermoplastics?

1

100% recycled content

made solely with post-consumer recycled plastic and tyre rubber crumb, with no chemical additives, for non-food applications

2

69% CO_2 reduction

Ecoplastomers production emits up to 69% less CO_2 than virgin plastomers

3

quality on par with traditional polymers

density and hardness are similar to traditional polymers, making it easy to incorporate Ecoplastomer®

4

independence from virgin raw materials

made solely with recycled plastic and recycled rubber crumb, cutting oil dependency and liberating landfills

5

up to **30% reduction** in production **costs**

reduction in injection cycle time of between 10%-30% provides considerable cost savings, not achievable with virgin thermoplastics

6

better adhesive properties

paint and overmolding adhesion - products made from Ecoplastomers eliminate the need for any specific pre-coating preparation

7

zero-waste production

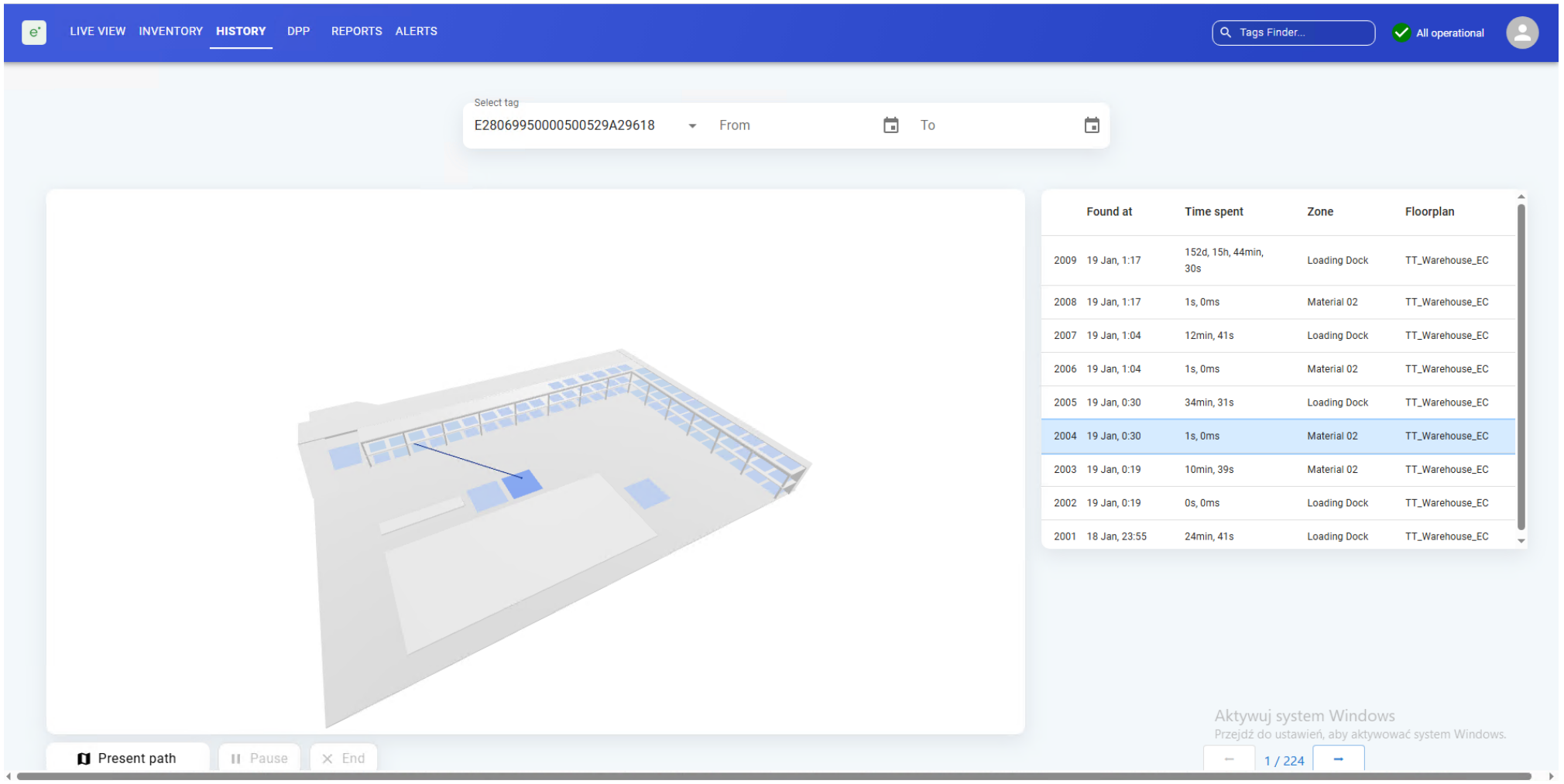
every grain of the purchased material can be returned to the production process

8

circular materials for sustainable design

any product made from Ecoplastomer® can be recycled at least 5 times - this way, the recycled content we use does not go back to the landfill and stays in the closed loop

Digital Twin



Digital Product Passport

ecopolplast
Powered By CIRCULENS



Digital Product Passport Last Updated: 31/03/2025

ECOPLASTOMER® PP 70 805 kg

ECOPLASTOMER®

PRODUCTION DATE:	COLOUR:	SERIAL NUMBER:
12/04/2024	black	20240412.06:06:001

GTIN: 5906924338005

PRODUCED IN POLAND

Aktywuj system Windows

Digital Product Passport

Company Information

Ecopolplast Sp. z o.o.

ecoplastomer.eu

NIP: 8411723916
REGON: 381498358

ADDRESS:

Chwaszczyńska 151E
81-571 Gdynia

PRODUCTION SITE:

Chwaszczyńska 151E
81-571 Gdynia

About Our Company

Ecopolplast are the creator of innovative technology and manufacturer of a brand-new product – Ecoplastomer®, the first fully circular thermoplastic materials made solely with recycled content that reduce CO_2 emissions by up to 69% and save production costs without compromise in quality. The company was established in Poland in 2018. Our mission is to reinvent the use of recycled materials in manufacturing.

Digital Product Passport

Enviromental Impact

1.20E+00 kg CO2 eq.

Potential for creating a greenhouse effect - total

1.24E+00 kg CO2 eq.

Potential for creating a greenhouse effect - resulting from the consumption of fossil fuels

-3.57E-02 kg CO2 eq.

Potential for creating a greenhouse effect - biogenic

2.55E-04 kg CO2 eq.

Potential for creating a greenhouse effect - land use and changes in land use

1.32E-08 kg CFC 11 eq.



Ozone-depleting potential of the stratosphere

5.66E-03 mol H+ eq.

Acidification potential of soil and water

Digital Product Passport

Material Composition



Recycled Polypropylene Recycled Tyre Rubber

Material Details

Total Weight: 1.00 kg

Recycled Polypropylene

0.70 kg 70%

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Life Cycle Assessment (LCA)

Environmental Impact

Material Acquisition

Koszalin, Lubawa, Śrem, Poniatowa, Trzydnik

High

Significant consumption of natural resources and energy

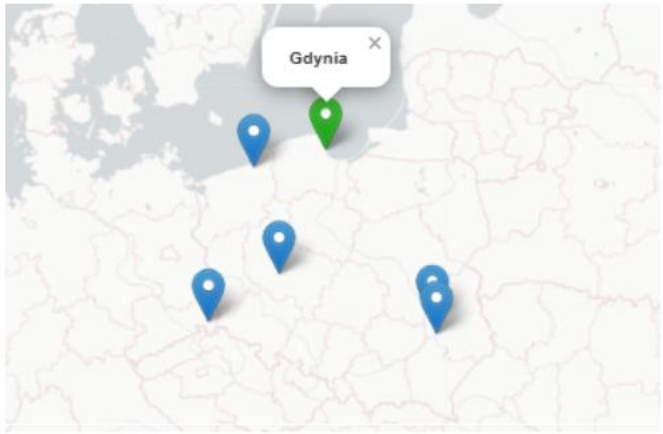
Production Gdynia

Emissions, chemical usage, and water consumption

Medium

Product Location Map

Koszalin | Lubawa | Śrem | Poniatowa | Trzydnik | Gdynia



Future Challenge

at least

5 times

any product made from Ecoplastomer® can be flaked and reintroduced into the production cycle

How do we reflect it in the passport?

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Let's collaborate for a

sustainable future

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