

„KI & KUNSTSTOFFRECYCLING“

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ALPLA Werke Alwin Lehner GmbH & Co KG

ALPLA – Global leader in packaging solutions











Our Facts

-  **23,300** Employees
-  **190** Production facilities (including 68 in-house)
-  **46** Countries
-  **€ 5.00** Billion euros – total sales 2021
-  **1955** Foundation

We specialise in

- Packaging systems
- Bottles
- Closures
- Injection-moulded parts

Our market segments

- Beverages 
- Food 
- Milk & Dairy 
- Beauty Care 
- Home Care 
- Oil & Lubricants 
- Pharmaceuticals 
- Crop-protection 

Circular Economy

- Production — 190 plants in 46 countries
- Bottler / Customer / Brand owner
 - Beverage
 - Food
 - Dairy /Milk
 - Home care
 - Beauty care
 - Pharmaceutical
 - Oil & Lubricants
 - Crop protection
- End consumer
- Collection
- Waste management
- Recycling
 - rPET (A, P, D, I, Mex, Thai) $\Sigma 203.000$ t/a
 - rHDPE (A, E, Mex, Thai) $\Sigma 74.000$ t/a



Circular Economy at ALPLA

Reduce

ALPLA is reducing its carbon emissions through **inhouse production** and **lightweighting**.

Plastic as a sustainable packaging material is verified by a scientific **Life Cycle Assessment**.



Inhouse



Lightweighting



Life Cycle Assessment



Simple One



Re-usable PET Bottles



Vöslauer Bottle



Reduce



Reuse



Replace



Recycle



Paper Based



Bio Based



ALPLA Recycling



Closed Loop



Design for Recycling

Circular Economy at ALPLA

Reuse

ALPLA develops **reusable packaging** such as the “Vöslauer Bottle” and GDB*, adding another layer of circularity to plastics.

*Genossenschaft Deutscher Brunner



Inhouse



Lightweighting



Life Cycle Assessment



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Design for Recycling

Reusable PET – Best Practice

Customer Solutions

Customer: GDB

- 1 l reusable PET bottle (PCO 1810 MW)
- Produced on ALPLA machine technology
- Up to 50% rPET usage possible
- Minimum lifetime: 15 cycles



Customer: Vöslauer

- 1 l reusable PET bottle (PCO 1881 MW)
- Produced on ALPLA machine technology
- Up to 50% rPET usage possible
- Minimum lifetime: 15 cycles
- Launch in the Austrian market Q1 / 2022



Customer: Coca-Cola

- 0.5 l, 2 l and 2.5 l reusable PET bottles marketed in Costa Rica, Mexico and South Africa
- Minimum lifetime: 25 cycles



Circular Economy at ALPLA

Recycle

ALPLA owns **recycling plants**, follows ambitious recycling targets, established an own **closed loop system** and drives **design for recycling** in all products to ensure recyclability.



Inhouse



Lightweighting



Life Cycle Assessment



Simple One



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Reusable PET Bottles



Vöslauer Bottle


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ALPLA Recycling

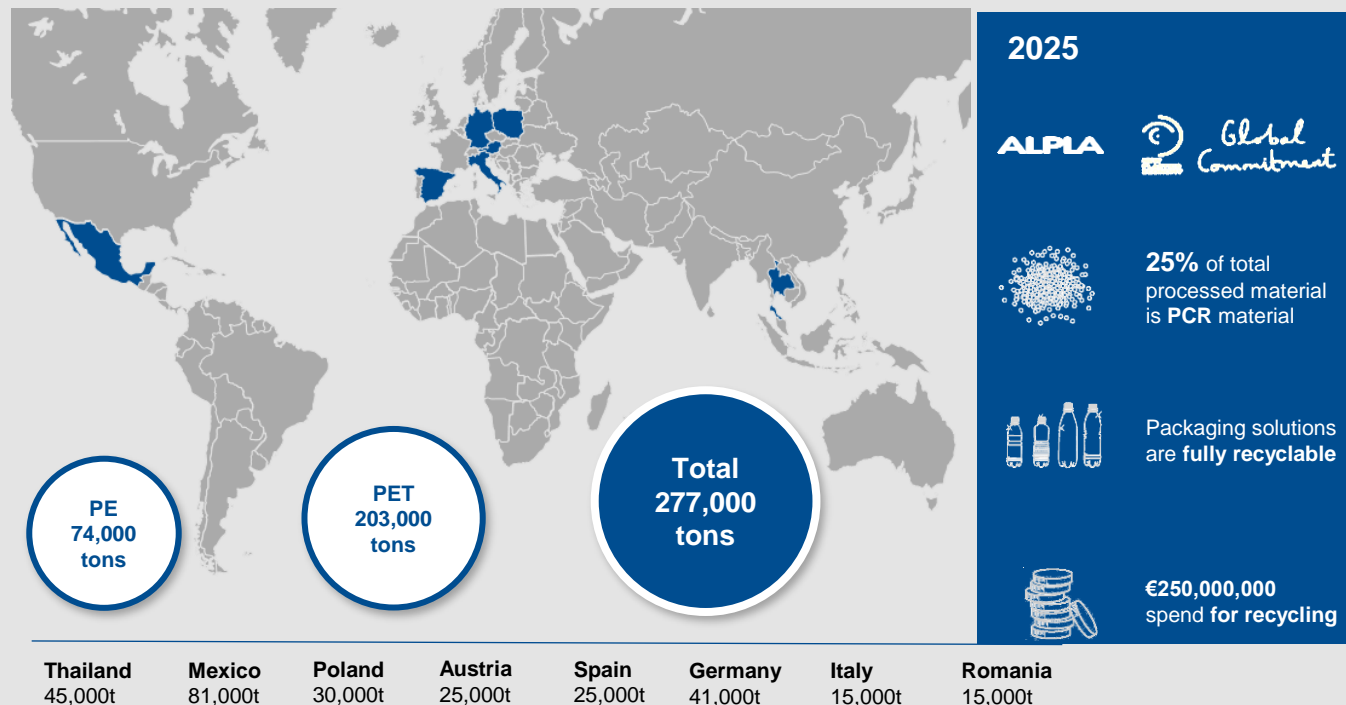


Closed Loop



Design for Recycling

ALPLA's **recycling plants** have a capacity of 277,000 tons (2022).
We confirm the ambitious targets in the New Plastics Economy Global Commitment.





Our rHDPE input and output is colorful!



Bales



Color sorted
bottles



Washed and
sorted flakes

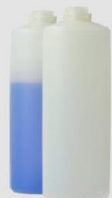


Washed and
sorted flakes



Generating and keeping high-quality color streams

rHDPE bottles from Suminco plant:
made of 100% recycled HDPE without masterbatch or dye



SUM rHDPE 32SF04 nat02



SUM rHDPE 32SF04 whi02



SUM rHDPE 32SF03 gry04



PRT rHDPE 32WE07 gry06



PRT rHDPE 32WE04 blu03



PRT rHDPE 32WE04 ylw02



rHDPE bottles from Suminco plant:
black or blue without and with masterbatch



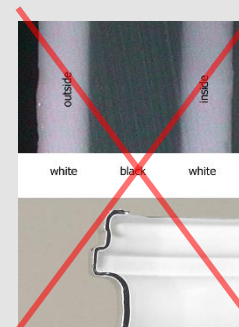
Testing samples for an orange container from

100% white rHDPE (left) – to 100% yellow rHDPE (right)

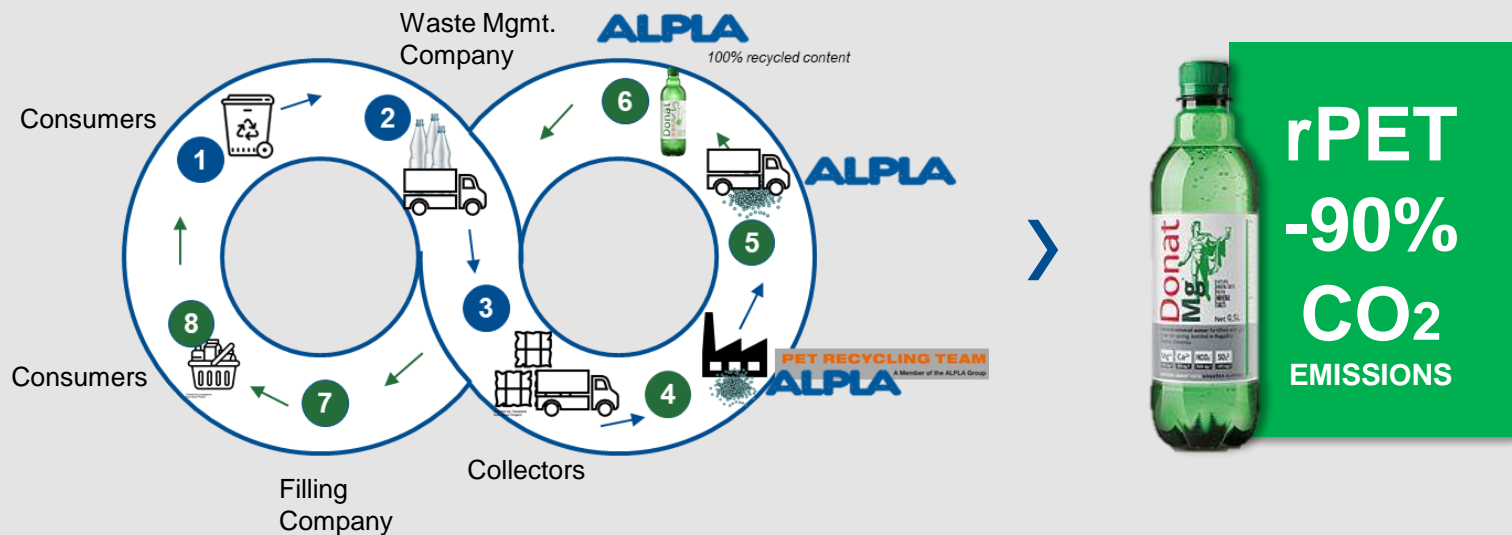


We need to avoid grey inner layer in 3-layer structures to keep the colour streams intact in the long run

- Solution – see right top box
- Otherwise “grey will be the new white”



ALPLA's closed loop system in Slovenia is industry best-practice, enabled by own recycling plants



ALPLA's competitive advantage results from **own recycling plants** where **rPET granulate is produced**. Thereby, ALPLA can reduce CO₂ emissions and is less depended on external recyclers.

Collection



Circular Economy at ALPLA

Replace

ALPLA invests in research and development of **Bio and Paper based products** to further diversify the product portfolio.



Inhouse



Lightweighting



Life Cycle Assessment



Simple One



Paper Based



Bio Based


Reduce


Reuse


Replace


Recycle



Reusable PET Bottles



Vöslauer Bottle



ALPLA Recycling



Closed Loop



Design for Recycling

ALPLA's joint venture PABOCO - The paper bottle company



- **PABOCO** is making paper bottle packaging for liquid filling goods
- On the mission to provide **fully biobased, biodegradable fibre packaging solutions** in scale
- Focus on **recyclability** in the paper stream and emission reduction by technology improvement
- ALPLA's first **major investment** into an alternative packaging material
- Development and Implementation pursued in parallel, currently a first generation with 65% plastic reduction available

ALPLA is also experienced in **bioplastics**, offers products made thereof and invests in research and partnerships



Biodegradable Coffee Capsule

- Home compostable coffee capsules
- OK Compost Home & industrial certified
- High content of renewable materials (>60%)



Partnership

- ALPLA partners with panara
- Slovakian start up
- Research towards fully biobased plastic



