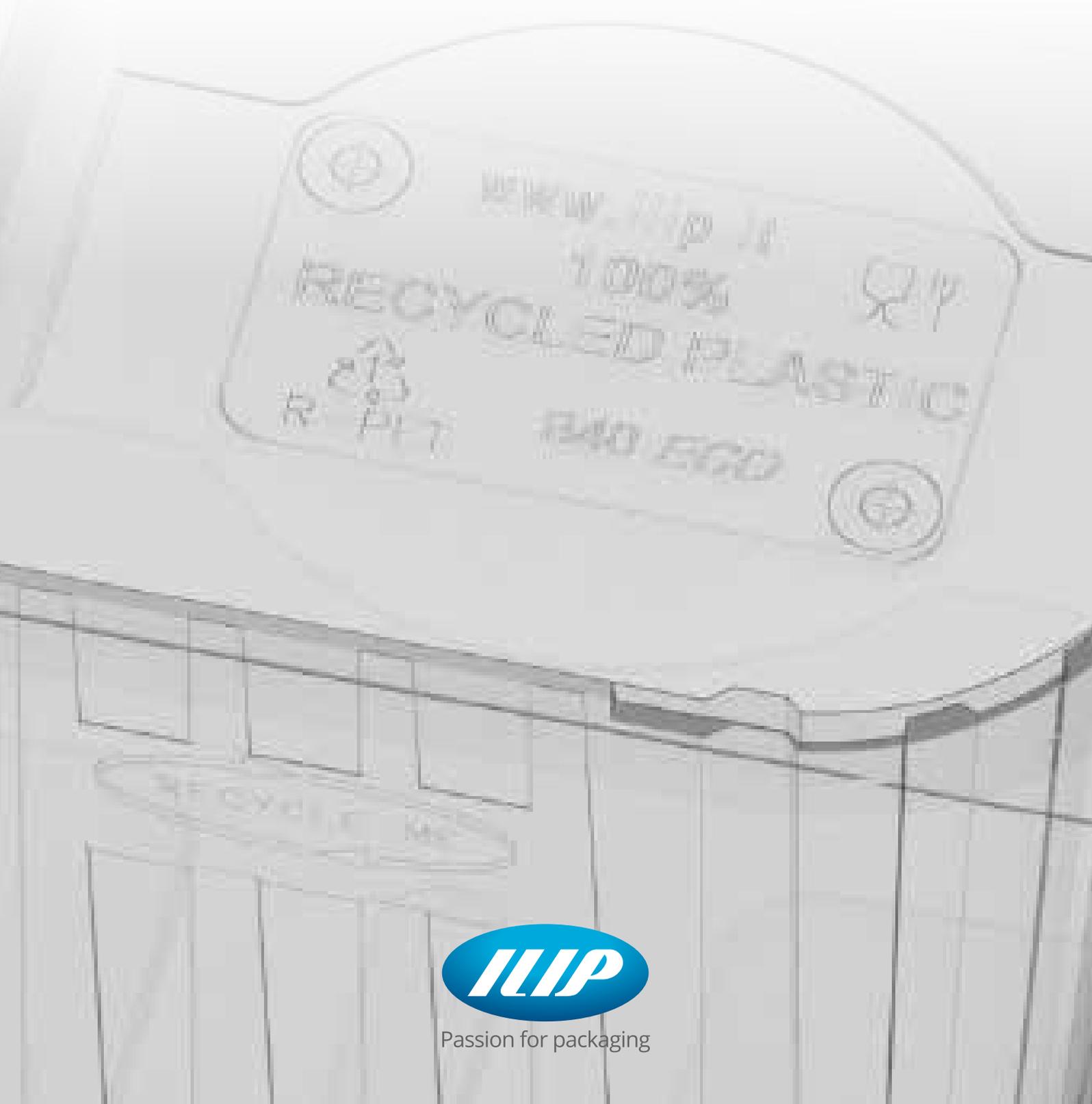


Recycled [PET]

The ILIP approach



Passion for packaging



R-PET and the ILPA Group

The I.L.P.A. Group and ILIP cutting-edge in sustainability and the circular economy: the intra-group CLOSED LOOP



Passion for packaging



THE STRENGTHS

- ▶ Vertical integration of the supply chain, closed loop and complete intra-group control over the recycling of post-consumer PET, guaranteeing the origin and complete traceability in compliance with Regulation 282/2008
- ▶ EuCertPlast and EuCertPlast Food certified recycling plant (no: 0182-04-21-TAB-MT)
- ▶ Production of EFSA-approved food grade R-PET (EU register no. RECYC105)
- ▶ Possibility of increasing PET recycled content up to 100%
- ▶ Concrete example of the transition of plastic packaging towards the circular economy
- ▶ Participation in Italian and European working Groups to consolidate tray-to-tray recycling



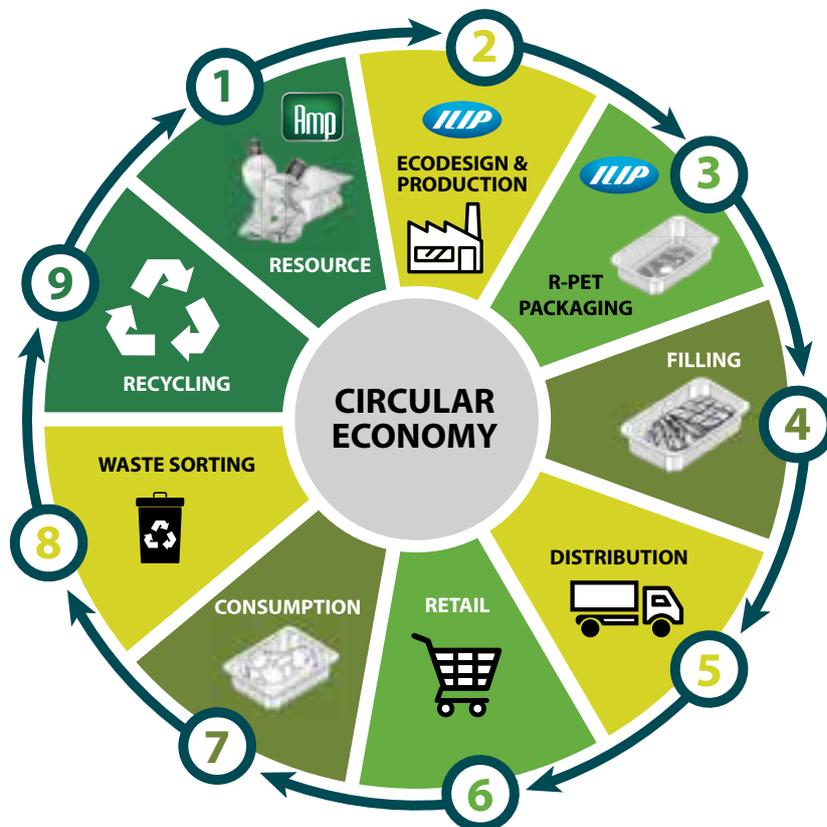
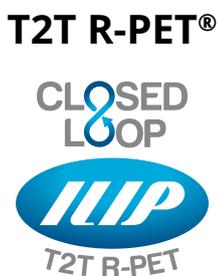
R-PET technologies

The ILPA Group, of which ILIP is a member, has vertically integrated the R-PET supply chain and has a cutting-edge recycling plant in AMP Recycling Ferrara, where it mechanically recycles post-consumer PET food containers and bottles to obtain, in line with the circular economy approach, secondary raw materials in the form of flakes, which it can then use in its products.

AMP Recycling also has an EFSA-authorized decontamination process used to treat post-consumer flakes to obtain material suitable to come into direct contact with food (aka "Food Grade R-PET").

As ILIP is therefore integrated into an intra-group closed cycle, it uses all fractions of recycled PET available in its manufacturing processes.

The extrusion of recycled PET flakes takes place in all the Group's companies (AMP Recycling, ILIP and MP3), creating both single-layer and multi-layer structures, depending on the characteristics of the starting material and the finished product to be obtained.





R-PET: Ilip's Closed Loop

Since its foundation, back in 1962, ILIP has always pursued **excellence in food packaging**, developing solutions that protect, preserve and optimise the packaged product and, last but by no means least, improve the consumer experience.

ILIP and the ILPA Group companies, with a recycling capacity of **60,000 tonnes of PET** per annum, help:

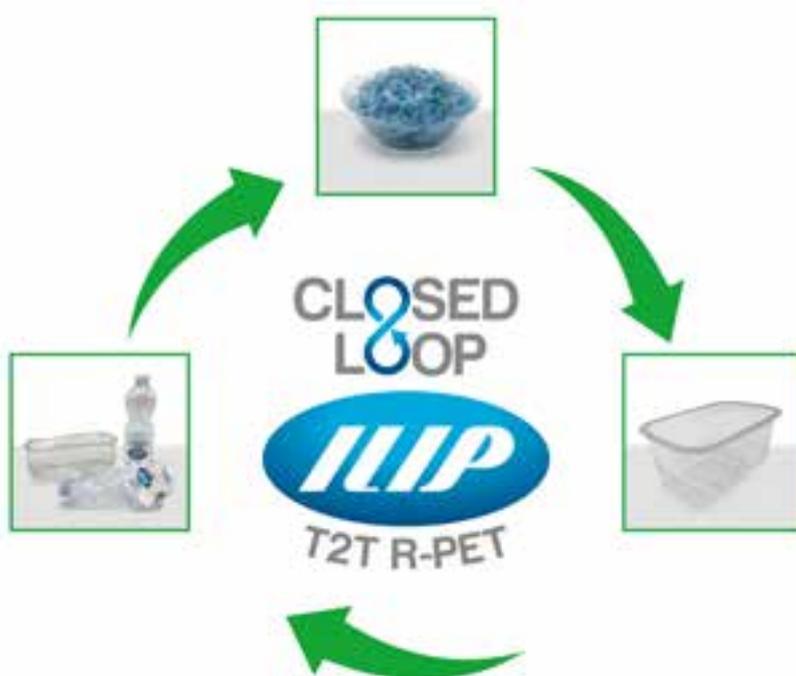
- ▶ **reduce the environmental impact of the products they recycle and those they manufacture;**
- ▶ **achieve the Italian plastic packaging recycling targets, operating in their territory of choice, Emilia-Romagna;**
- ▶ **achieve Europe's circular economy targets.**



T2T R-PET®

T2T R-PET® is the acronym of "tray to tray" in recycled PET, of R-PET trays produced by recycling post-consumer R-PET or PET trays. This pursues the goal of the "**closed loop**", not only within the ILIP Group, thanks to the vertical integration of recycling, but also thanks to the recycling of PET food packaging.

All ILIP's R-PET packaging is produced not only with bottles, but also with recycled PET trays and punnets.





R-PET: the ILIP approach

ILIP is a European leader in the production of packaging and the converting of plastic and bioplastic, helping improve environmental sustainability in the communities in which it operates and where it is established and of the served markets.

HERE AND NOW.

All in complete compliance with European legislation governing employment, health, the environment and consumer protection.

In this sector, definitions are important, as are clarity and the credibility of those working day-in, day-out to improve their products, minimise their environmental impact and maintain the necessary food safety.

It is only by avoiding unilateral statements characterised by what is today termed “greenwashing” that we can make a concrete positive impact on the environment and communities involved directly.

This is why **our approach is based on verified and verifiable data and declarations** and this is also why we have begun certifying our products with **EPDs (Environmental Product Declarations)**, starting with the most popular models.

EPD®
CLIMATE DECLARATION FOR RIGID THERMOFORMED PET PUNNET
 Functional unit: 3 unit of B40RPET85FP - 22061 in PET (polyethylene terephthalate) with PET top film (18g)

The climate declaration shows the emissions of greenhouse gases, expressed as CO₂ equivalents. It is based on verified results from a lifecycle assessment (LCA) performed as basis for an EPD®, in accordance with ISO 14025.

Information about the product
 Rigid thermoformed PET punnet (18g, item code B40RPET85FP - 22061, made from 92% R-PET and 8% PET with PET top film). This fresh produce punnet is generally used for the packaging of approx. 500g of fresh fruit & vegetable and it is specifically designed for automated tray sealing packing lines.

Climate declaration
 The diagram below shows the greenhouse gas emissions, quantified as carbon dioxide equivalents (kg CO₂ eq.) for 1 unit of B40RPET85FP - 22061 in PET (polyethylene terephthalate) with PET top film (18g). This Climate Declaration is based on an Environmental Product Assessment (EPA) and a comprehensive Life Cycle Assessment (LCA) study from cradle-to-grave, including product, construction/retailation, use and end of life stages of Rigid thermoformed PET punnet by ILIP.

Category	Value
Unborn	0.044
Born	0.004
Awareness	0.007
Total	0.055

Information about the company
 Established in 1962, ILIP is a key member of the ILIP Group, which also controls the companies WOP, specialized in the production of intermediate plastic films and sheets and AMP Recycling, specialized in post-consumer PET bottles recycling. ILIP is a leading European plastic and bioplastic raw materials converter operating with three business units: Foodservice Packaging, Fresh Produce Packaging, Fresh Food Packaging, and serving different market segments such as retail, foodservice and the agri-food industry, in over 50 countries in the 5 continents.

With its thermoformed plastic and bioplastic food packaging solutions ILIP aims to add value to the packaged product, extend its shelf life, offer to its clients tailor-made and certified packaging and ultimately improve the consumer experience.

Other environmental impacts
 For the full EPD, see www.environmentaldata.com

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ILIP
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R-PET: definitions

Let us clarify matters: **here in ILIP, as a rule, we consider everything that is not “virgin” raw materials to be “recycled”,** i.e. everything that is not acquired directly from the petrochemical industry.

The concept of “recycled” includes various fractions and they are all used by ILIP in its production processes:

- ▶ The **secondary raw materials** deriving from the separate waste collection of post-consumer PET food containers/packaging (after accurate selection, washing, grinding and transformation into flakes) **is defined as “PCR” (Post Consumer Recyclate)**
- ▶ **Waste obtained from the production process** of packaging/containers not yet distributed on the market, recovered by external users **is defined as “PIR” (Post Industrial Recyclate)**
- ▶ **Geometric waste from thermoforming, or waste for non-compliant products,** generated by a packaging/container manufacturing process, and which is reworked as part of the same process **is defined as by-products or internal waste**





R-PET: recycled content

According to ILIP's definitions and with reference to standard EN ISO 14021:2016/A1:2021, the result of the following percentage is considered as the comprehensive recycle content:

$$\%R\text{-PET} = \frac{A}{P} \times 100$$

Where A is the sum of PCR + Internal waste + PIR

P is the sum of Virgin + PCR + Internal waste + PIR + master batches/additives

To calculate the comprehensive recycle content, we use the **annual mass balance of consumption of the individual components** used to produce R-PET sheets. This calculation shows that **all R-PET products are created with a comprehensive R-PET* content of 93%**, with a typical content of the various fractions of materials (PCR; PIR; WASTE; VIRGIN; ADDITIVES) of:

65% PCR

30% internal waste (which contains an average of 94%* R-PET)

5% other (additives, virgin PET)

Some of ILIP's articles are, however, also created using different recipes and compositions to those indicated and with a total R-PET content of up to 100% depending on the specific production process.

CLOSED
LOOP



T2T R-PET

* calculation method certified in the EPD of the ILIP product S-P-02113 - Rigid thermoformed PET punnet (environdec.com) and confirmed by the calculation of the annual mass balance and by traceability.



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