Innovations in the Packaging Sector Success Stories

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Agenda

1. About AIMPLAS
2. Innovations in the packaging sector
3. Case studies

1. About AIMPLAS



What is AIMPLAS?

A technology centre with more than 35 years' experience in the **plastic sector.**



OUR PURPOSE

Innovation in plastics for a better future in the world

Pilot plants: 6,500 m^2

Laboratories: 4,500 m^2

Training: 1,000 m^2

AIMPLAS

MARKET ORIENTATION


Packaging


Automotive & transport


Printing


Aeronautics


Agriculture


Electrical &Electronics


Energy


Construction


Reciclyng


Health


Navigation


Aerospace


Furniture


Leisure & sports

AIMPLAS

2025 DATA

26,6 M€
revenue

+3.500
clients

+900
member companies



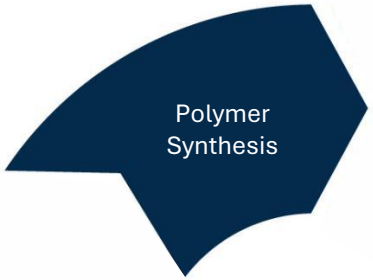
AIMPLAS

Main AIMPLAS Activities

2025 DATA

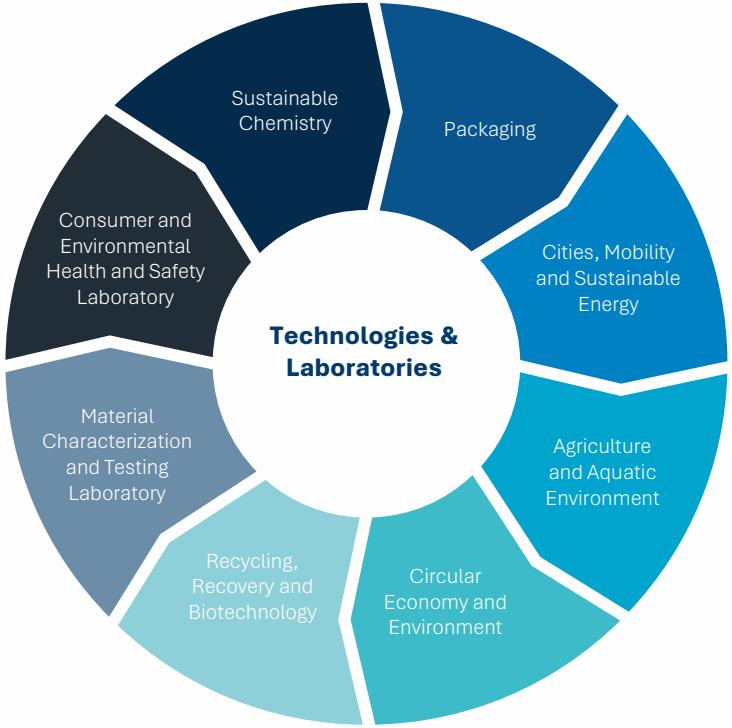


Expertise across the entire plastics value chain



AIMPLAS

Comprehensive management to provide global solutions



AIMPLAS

2. Innovations in the packaging sector

Adapting to PPWR Requirements



Source

- Recycled material – MR/QR
- Reusable / reciclable
- Renewable sources – waste/by-prod.
- Biodegradable / Compostable

End-of-life

Adapting to PPWR Requirements

STRATEGIES

Ecodesign

Designing by minimizing the environmental impact along the value chain, promoting sustainability and ecologic responsibility.

From source to EoL

- Including strategies like:
  - Lightweighting
  - Monomaterial
  - New designs
  - Integration of elements (labels, decorative, …)

3. Case studies

LIGHTWEIGHTING

- **Thin-wall Packaging:** thin wall injection moulding



FINISSIM

Thin wall food containers made of r-PET by the use of non conventional IML injection moulding.

- Wall thickness reduction: from 1,3-1,5 mm to 0,5-1,0 mm

- Challenges: r-PET modification for the technology



GENERALITAT VALENCIANA
IVACE+i
Financiado por la Unión Europea

CASE STUDIES

RECYCLABLE

QIUB AIMPLAS

With more than 50 years' experience in injection moulding, we specialise in the design and manufacture of spice and salt grinders, and nothing motivates us more than creating a new grinder for you.







Spices mill
100% monomaterial
100% recyclable
100% reusable

Pack The Taste | QIUB

CASE STUDIES

RECYCLABLE

BLOG 05/11/2026

Premium PET cosmetic packaging: the QIUB Packaging case study



QIUB Packaging and AIMPLAS have developed a rigid PET cosmetic jar, manufactured by injection moulding, with the transparency and glass-like appearance characteristic of premium packaging. The aim is to offer cosmetic brands a recyclable alternative to materials such as SAN, PMMA, ABS and polycarbonate, without compromising aesthetics or performance. This article explains the technical challenge of injection moulding PET in thick walls and how the packaging has been validated.

Why is it so difficult to injection mould PET with thick walls?

This development has worked with **thicknesses exceeding 5–6 mm**. In parts this thick, **PET injection moulding** has a very narrow processing window: small deviations in the process can cause visible or structural defects.

The main risks are:

- **Loss of transparency**, which compromises the glass-like effect.
- **Residual stresses** in the part.
- **Non-uniform shrinkage** during cooling.
- **Undesired crystallisation** of the material.

This difficulty explains why there are currently very few jars of this type on the market, and why the product requires particularly rigorous validation.

CASE STUDIES

RECYCLABLE

Monomaterial flexible packaging: the Bimbo Little Bites case study



What results did Bimbo achieve?

♻️ Two **monomaterial flexible packaging structures** for Little Bites, one for the United States and another for Brazil, designed to be recyclable in their respective markets.

📉 A **lower carbon footprint**, thanks to material selection and improved recyclability.

💧 The same **freshness and quality** as with the previous packaging.

✅ A **validated pre-production run**, together with the technical parameters required for industrial-scale production.

SUCCESSFUL CASE

BIMBO MEXICO

CIRCULARPACK 2022 Project



GRUPO BIMBO

OBJECTIVE

Study, selection and pre-series production of a single-material, sustainable flexible packaging structure for the BIMBO Little Bites product, complying with product requirements.

SCOPE

Study and assessment of the packaging and its processing from pre-press and inks to creating the packaging. Report and technical parameters for industrial production

CIRCULAR PACK

COMEXI - AIMPLAS

ORIGINAL DESIGN	CIRCULARPACK STUDY DESIGN	BIMBO APPROVAL
Current packaging analysis Materials Process Carbon footprint Recyclability	Alternative structures Structure selection and optimum processing Reduction of CO2 footprint Pre-series production	Theoretical study approval Pre-series approval Project approval

"The CIRCULARPACK service has offered us a real and sustainable solution for packaging one of our star products, Little Bites. Now we have a 100% recyclable packaging with a lower carbon footprint.
We are very satisfied to have worked with Comexi and AIMPLAS in this great challenge for the company". **Name, position R+D Bimbo**

Monomaterial flexible packaging: the Bimbo Little Bites case study

RECYCLED CONTENT



BOTTLE4FLEX



AIMPLAS, Covinil & Eroski

Skinpack 100% recyclable using rPET.

Results:

- rPET from bottles, adapted to be more flexible, able to withstand orientation.
- recycled content increase from 20% to 80%.

Proyecto CPP2021-008773 financiado por MICIU/AEI/10.13039/ 501100011033 y por la Unión Europea NextGenerationEU/ PRTR

MINISTERIO DE CIENCIA, INNOVACIÓN Y UNIVERSIDADES

Financiado por la Unión Europea NextGenerationEU

Plan de Recuperación, Transformación y Resiliencia

AGENCIA ESTATAL DE INVESTIGACIÓN

REUSABLE



Reuse concept: the same use for which the packaging was originally designed.

Ready-to-eat food delivery system using reusable and tracked packaging in a close loop, to reduce the carbon footprint in 90-95 % compared to single-use packaging.

Partners: **AUSOLAN**, **AWAYTER**, **ITC Packaging** & **AIMPLAS**.

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Thank you!!

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AIMPLAS

REDIT
INNOVATION NETWORK

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Fedit
Centros Tecnológicos de España