



**AIMPLAS**

PLASTICS TECHNOLOGY  
CENTRE



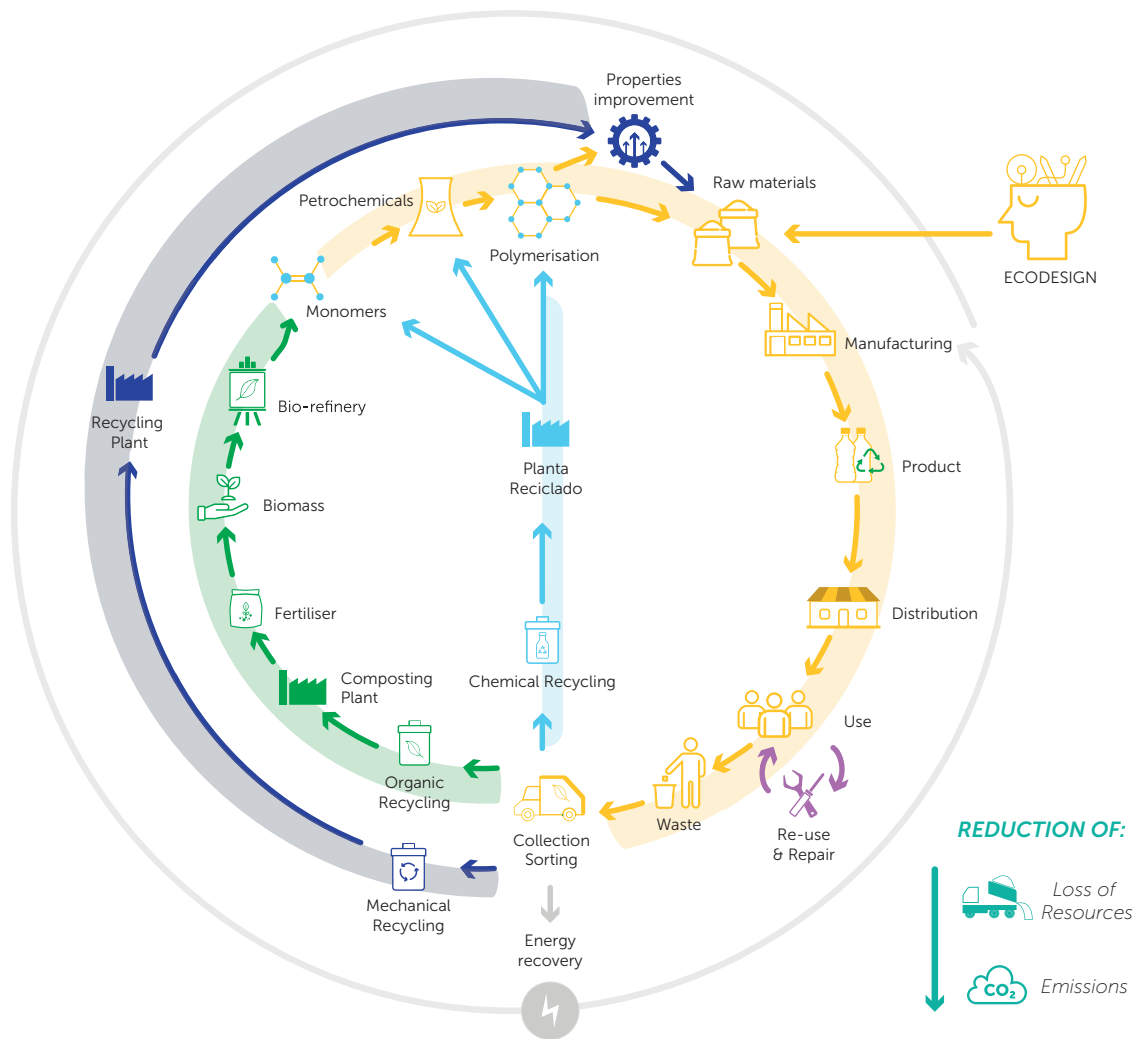
**INNOVATION**  
in **PLASTICS**

**PACKAGING** <sup>2024</sup>



The commitment to the Circular Economy, based on the principles of Reduce, Reuse, and Recycle, is a challenge for sustainability and waste management. At AIMPLAS, we work to address the challenges and opportunities faced by packaging companies.

We offer solutions to the food, hygiene, cosmetics, medical, pharmaceutical, cleaning and chemical industries, among others.





## SUSTAINABLE PACKAGING

Development of packaging adapted to single-use plastics legislation.

Validation of reusable packaging. Validation of reusable packaging cleaning systems (cleanability).

Development of packaging with less environmental impact through eco-design and using methods such as carbon footprint and life cycle analysis (LCA).

Product recyclability.

Use of sustainable materials (from renewable sources, recycled, bioplastics). Biodegradability and compostability studies.

Product certification. Ecolabels.

Development and validation of reusable packaging.

Control of marine waste, minimization of waste, collection, characterization and applications for marine waste.

Workshop for adapting packaging to the circular economy. Training on recycling, recyclability, bioplastics and carbon footprint.







## INCREASED SHELF LIFE TO REDUCE FOOD WASTE

Development of materials with better properties for use in applications with single-material, multilayer packaging.

Development of materials with high barrier properties for application in multilayer structures by coextrusion, printing and lamination.

Control and characterization of packaging, including identification of materials in multilayer structures and testing permeability and sealability.

Development of smart packaging systems for expiration dates to reduce food waste.

Use of waste to obtain biopolymers and additives suitable for food contact.

Development of active packaging to extend the shelf life of packaged products.



## SAFE PACKAGING

Validation to ensure packaging complies with food contact plastics legislation.

Overall and specific migration control of substances, additives, inks and adhesives.

Studies to identify and minimize non-intentionally added substances (NIAS) by chromatographic analysis and in vitro bioassays.

Compliance with standards and legislation (e.g. pharmacopoeia, FDA, cosmetic packaging).

Compliance with legislation on recycled products used for food contact in the authorization and product development processes based on the use of functional barriers.

Studies on the detection and minimisation of microplastics in packaging.





## PACKAGING ADAPTED TO THE CONSUMER

Design and development of packaging adapted to user habits of the elderly, childproof packaging, easy-opening systems, dispensers, labels, smart visual indicators, etc.

Development of customized packaging using digital and 3D printing.

Development of materials with high thermal resistance for microwaveable and ovenproof containers.

Development of packaging with hydrophobic and oleophobic properties.



## ASSISTANCE AND IMPROVEMENTS IN PROPERTIES

Advice on the analysis of causes of failure, breakage and malfunctioning.

Packaging control and characterization: leaks, breakage, watertightness, chemical compatibility, sealability, etc.

Enhanced properties by combining polymers, additivation and/or polymer modification and processing conditions.

Training on materials, processes and characterization of plastic materials and processes: compounding, extrusion, injection moulding, printing and lamination.

Expert reports and technical reports for arbitration.





## PILOT PLANTS

Our expertise and capacity for innovation are the best recipe for assisting you with product improvements and the optimization of transformation processes.

### **Formulation and modification of polymers and formulation of coatings:**

Masterbatches and reactive extrusion.

Formulation of conventional polymers, bioplastics and technical polymers.

Formulation of coatings.

### **Flexible packaging: mono and multilayer reels (semi-finished), tubes:**

Extrusion and co-extrusion of blown film.

Extrusion and co-extrusion cast sheet.

Extrusion coating.

Machine Direction Orientation system (MDO).

Converting:

Corona treatment.

Flexo and gravure printing.

Solvent, water-based, solvent-less and hot-melt lamination.

Vertical form-fill sealing system VFFS.

### **Rigid and semi-rigid packaging: bottles, jars, trays and blisters:**

Conventional injection moulding.

Multi-component injection moulding.

Extrusion and co-extrusion blow moulding.

Preform blow moulding.

Chemical and physical foaming.

Thermoforming.







## CERTIFICATIONS

AIMPLAS has a team of professionals accredited to carry out the audits that lead to obtaining different certifications for materials and packaging, the body that issues the certification.

In addition, our Biodegradability and Compostability Laboratory is recog-

nised by TÜV Austria, DIN CERTCO and BPI. This allows us to carry out biodegradation studies in soil and compost environments, as well as the complete compostability test scheme under home and industrial conditions.

### RECYCLING

RecyClass



### RECYCLABILITY

RecyClass



### RE-USE



### BIODEGRADABILITY AND COMPOSTABILITY



## SPECIALISED TRAINING

**AIMPLAS**  
PLASTICS ACADEMY

Professional Certificate in Plastic Packaging designed specifically to help professionals and graduates to understand the challenges of the sector and how we can contribute to its improvement.

Workshop for adapting packaging to the circular economy. Training on recycling, recyclability, bioplastics and carbon footprint.

Basic and advanced workshops on legislation to help businesses guarantee safety and comply with legislation on food contact material.

Check out our offer at:  
[www.plasticsacademy.net](http://www.plasticsacademy.net)



València Parc Tecnològic  
Calle Gustave Eiffel 4  
46980 Paterna · Valencia · SPAIN  
Tel. +34 96 136 60 40  
[info@aimplas.es](mailto:info@aimplas.es)  
[www.aimplas.es](http://www.aimplas.es)