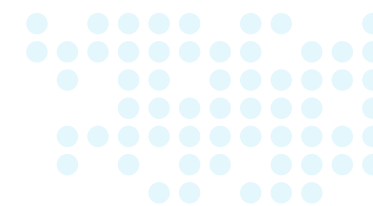


# AERONAUTICS



**AIMPLAS**  
PLASTICS TECHNOLOGY  
CENTRE



innovation  
IN PLASTIC



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The use of composite materials in the aerospace industry allows significant weight reduction of aircraft structures and, therefore, improves the energy efficiency and reduces manufacturing costs.

Current technology manufacturing of these components requires complicated and intensive processes in skilled labour as well as equipments. In this way, in order to help companies, AIMPLAS provides technological support in R&D, analysis and testing, technical assistance, competitive intelligence and training.



AIMPLAS develops R&D projects adapted to company. Within our investigation rows in the aeronautical sector, there are some which stand out:

- Polymeric materials in light multilayer structures with improved properties (fire resistance, mechanical performance, high electrical conductivity, antimicrobial functionalities, etc.).
- Development of manufacturing processes of non-autoclave composite materials.
- Anti-icing systems and other advanced coatings based on self-assembled systems.
- Production of high-performance biocomposite materials.
- Incorporation of bioplastics in interior components of aircrafts (backrests, seats, magazine racks, trays, carpets, etc.)

In the fields mentioned above, we have outcomes of interest directly applicable to the products of your company.



## Analysis and Characterization of plastic components

### Non-destructive tests:

ultrasound.

### Composite and Adhesive:

Interlayer fracture toughness.

Interlayer cutting

Tensile and compressive strength.

Flexión de sándwich.

Fabricación en autoclave.

### Structural

Static and fatigue testing of composites sandwich panels, compression and shear resistance.



## Technical Assistance

AIMPLAS helps you to solve your technical problems within a short time as a result of our experience in polymeric materials and processes for the aeronautical sector:

- Manufacturing process automation.
- Replacement of metallic materials by polymeric or composite materials in parts for different sectors.
- Design of resin transfer moulds (based on the simulation of the injection process).
- Feasibility study to replace traditional composite materials by biocomposite materials.
- Assessing applicability of using alternative curing techniques such as microwave and UV radiation.
- Reduction of manufacturing costs of polyurethane moulds by performing pre-industrial tests
- Failure causes, rupture, degradation, installing problems, etc.
- Expert reports and arbitrations.
- Improvement of the environmental sustainability of products.

## Training

We offer face-to-face, online and tailor-made courses and in-company training about:

- Composite materials (properties, characterisation, failures, etc.) processes.
- Transformation processes (extrusion, injection, compounding, composites, etc.).

Conferences, seminars and workshops about composite materials, latest developments in markets, new challenges of plastic materials...

## Competitive Intelligence

Key strategic information services for business decisions.

- Technological Watch: Products, transformation processes, new materials, application, equipment, markets...
- Competition and prices analysis.
- Surveillance Strategic Business Units to create innovative ideas and business opportunities.
- Information for internationalization processes.
- Specialised services for monitoring legislation and standards.
- Technological Watch Bulletins and customised alerts
- Plastics Industry Observatory (Observatorio del Plástico).

[www.observatorioplastico.com](http://www.observatorioplastico.com).

