



The single partner for all your aircraft  
materials testing and innovation

# MATERIALS DEVELOPMENT TESTING LABORATORY



## AERONAUTICS, SPACE & DEFENCE

RESCOLL is in the heart of « Aerospace Valley ». With more than 20 years of experience in the field of polymers, composites, high performance materials, bonding and smart coatings, RESCOLL is a leader for France in materials development and testing for aeronautics industries.



Accréditation N°1-1995 et 1-6323  
Liste des sites et portées  
disponibles sur [www.cofrac.fr](http://www.cofrac.fr)



Qualified by :



## Testing and Analysis

- Mechanical tests (with instrumented specimens)
- Tensile strength and compression tests on composites and bonded assemblies
- Fatigue and dynamic tests (vibration, shock)
- Ageing tests and environmental testing

- Thermomechanical behaviour with DSC, DMA, TGA, TMA
- Electrical and thermal conductivity

- Chemical analysis: HPLC, FTIR, ...
- Fiber and void content and density

- Fire testing (Flammability, Smoke density and toxicity, Heat Release Rate, Seat Cushion test)

- Manufacture of test specimens (autoclave, resin infusion, filament winding, etc.) machining, bonding of tabs instrumentation
- Ultrasonic NDT with A-SCAN or C-SCAN, tap test, acoustic emissions

## Manufacturing

Through its subsidiary RESCOLL Manufacturing, we carry out high precision technical parts (turning, milling) and offers a complete service in the field of bonding operation

## Training

Rescoll is also a certified training center offering technical courses on various topics: bonding, materials, analysis techniques, chemistry regulations and their application.

## Research & Development Innovation

### Bonding

Customized formulation, technical support and process development, benchmark and adhesive solutions selection, design

### High performance materials and structure

Simulation by finite elements (design/sizing static and dynamic simulation), functionalization of materials and process development, digital materials behaviour laws

### Smart coatings

Anticorrosion, anti-staining, pre-bonding treatments, heating paint, electric and thermal conductive coatings

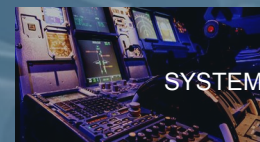
## Cabin Interiors and Structures

### CERTIFICATION SERVICES

- ◆ EASA Form 1
- ◆ Major/STC and Minor change approval
- ◆ Certification Programme
- ◆ Test plan (Flammability, Mechanical, Static, Dynamic, Environmental)
- ◆ ETSO and/or TSO approval

### TESTING LABORATORY

- ◆ Fire testing: FAR/CS 25.853 & ABD0031
- ◆ Static testing FAR25/JAR25
- ◆ Dynamic testing (shock, endurance and fatigue)
- ◆ Mechanical testing, sandwich panel qualification: ASTM, EN standards
- ◆ Environmental testing: RCTA DO-160, ABD100, MIL STD810



## Projects in progress

NEOFAC project: Validation of a dismountable composite wing (from 2015 to 2017)

Following the design sizing and certification of E-Fan 1.0 wings by **RESCOLL** and its partners:

- Initial conception of a hollow box composite wing (patented) by **RESCOLL**, **INSTITUT PPRIME** and **C3 TECHNOLOGIES**

- Conception optimization and sizing of a dismountable hollow box composite wing by **RESCOLL** and **INSTITUT PPRIME**

- Evolutive thickness of Nida Nomex lengthwise to increase the structural continuity by **PIKA**

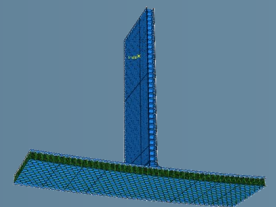
- One shot manufacturing into autoclave by **PIKA**

- Validation of the wing predictive model by **RESCOLL** with a static destructive test up to 12G

### Subsidisers



### NEOFAC TEAM



3D model T bond integrated into a structural model of wing



**RESCOLL Pessac**  
8, allée Geoffroy Saint Hilaire  
F-33615 PESSAC Cédex

**RESCOLL Rochefort**  
Rue Maurice Mallet, ZA de Beligon  
F-17303 ROCHEFORT

Phone : + 33 547 74 69 00 — Contact : [rescoll@rescoll.fr](mailto:rescoll@rescoll.fr)  
[www.rescoll.fr](http://www.rescoll.fr)

