

### RESCOLL, Société de Recherche

8 Allée Geoffroy Saint Hilaire CS 3002 F-33615 PESSAC CEDEX France

FOR THE ATTENTION OF
Stéphanie ARIGONI Resp. Assurance Qualité
Isabelle COCO Resp. Laboratoire

FROM

**BAVARD Karine** 

DATE

04/08/2015

E-MAIL

karine.bavard.external@airbus.com

PHONE

+33 5 82 05 23 09

OUR REFERNCE

COMP2015.0015 Ind. A

ARP-ID of the External Shop

296664

TYPE of External Shop Independent

### **Attestation letter for Qualification on Test Methods**

Dear Madam, Dear Sir,

We herewith inform that the couples <Test Methods / External Shop> as detailled in the Appendix have been either registered or modified in the Official Airbus Qualified Test Methods List (QTML) Database.

The latest valid status of all qualified <Test Methods / External Shop> couples is published by regular QTML reports:

- On Airbus homepage for Suppliers (http://www.airbus.com/tools/airbusfor/suppliers/) Only Independent Labs.
- On Airbus Supply Portal A2QS All External Shops.

A qualified couple is not linked to a specific product. It is the proof that the External Shop is meeting the requirement of the AP5262: Qualification Process of Couples <Test Method / External Shop>.

We remind you that the maintenance of your Test Methods Qualification depends on your monitoring on quality and technical aspects and is surveyed by Airbus on a regular basis, every year or every 2 years.

- On a quality aspect: we kindly ask you to indicate us any modification which could have a quality impact.
- Concerning technical requirements:
  - \* We kindly ask you to participate at least every 2 years to the PTP organized by Exova for the tests you perform on Airbus Products (see Appendix for details on next PTP participation requirements).
    - You can find all necessary information about PTP participation process on the website: https://ptp.exova.com. In case of PTP results out of tolerances, the couples qualification can be downgraded to an authorisation to proceed or withdrawn and the PTP participation frequency is reduced to one year, subject to acceptance by Airbus of your Root Cause Analysis and associated Corrective Actions.
  - \* On the other hand, you shall supply at least every 2 years the results of your Internal Homogeneity Studies per Test Families.

Airbus reserves the right to withdraw or suspend the qualification at any time for specific reason, e.g.

- Any major incident(s) detected on one or several Test processes
- Lack in quality
- Evidence non-compliance with the AP5262
- Loss of Airbus Supplier Approval
- Stop of the Business

Yours faithfully,

BAVARD Karine
Test Methods Qualification Engineer - POLV

MALHOMME Muriel
Test Methods Qualification Manager - POLV

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<u>Appendix:</u> Matrix of qualified Couples <Test Methods / External Shop>



We hereby declare the External Shop:

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### Qualified or Authorised to proceed for the following Test processes:

Test Standard(s) *	Test label	Complex.	Qualif. Status	Next PTP part. **	Remark
AITM 1-0002 (ISO 14129)	Fibre reinforced plastics - Determination of in-plane shear properties (±45° tensile test)	Low	Qualified	2015	
AITM 1-0003	Determination of the glass transition temperatures (DMA)	High	Authorised to Proceed December 2015	2015	Pending QCS
AITM 1-0005 (EN 6033)	Fibre reinforced plastics - Determination of interlaminar fracture toughness energy - Mode I - G1c	High	Qualified	TBD *	composite QCS131338
AITM 1-0007- A / B / C / D	Fibre reinforced plastics - Determination of plain, open hole and filled hole tensile strength	Low	Qualified	2016	Composite
AITM 1-0008- B / C / D	Fiber reinforced plastics - Determination of open hole or filled hole compression strength	Low	Qualified	2015	
AITM 1-0019	Determination of tensile lap shear strength of composite joints	Low	Qualified	2015	
AITM 1-0053	Carbon fibre reinforced plastics - Determination of fracture toughness energy of bonded joints - Mode I - G1c	High	Qualified	TBD *	composite QCS131335
AITM 2-0002	Resistance of Materials when tested according to the 12 s or 60 s Vertical Bunsen Burner Test	Low	Qualified		Composite (A) Nid d'abeilles (G)
AITM 2-0003	Resistance of Materials when tested according to the 15s horizontal bunsen burner test	Low	Qualified		Composite (A) Nid d'abeilles (G)
AITM 2-0004	Flammability of non-metallic materials - Small burner test, 45° - Determination of the resistance of material to flame and glow propagation, and to flame penetration	Low	Qualified		Composite (A) Nid d'abeilles (G)
AITM 2-0005	Flammability of non-metallic materials - Small burner test, 60° - Determination of the resistance of electrical wire insulation materials to flame at 60°	Low	Qualified		
AITM 2-0006	Determination of heat release and heat release rate of aircraft materials	High	Authorised to Proceed December 2015		Authorisation granted based in satisfactory technical test witnessing. Authorisation condition to completion of PTP.
AITM 2-0007	Determination of the specific optical smoke density of component parts or sub-assemblies of aircraft interior	High	Authorised to Proceed December 2015		Authorisation granted based in satisfactory technical test witnessing. Authorisation condition to completion of PTP.
AITM 2-0008	Determination of the optical smoke density of electrical and non-electrical cable	High	Authorised to Proceed December 2015		Authorisation granted based in satisfactory technical test witnessing. Authorisation condition to completion of PTP.

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### Qualified or Authorised to proceed for the following Test processes:

AITM 2-0038 Flammability of non-metallic heat shrinkable tubings - Small burner test, 60° - Determination of the resistance of non-metallic heat shrinkable tubings to flame at 60°  AITM 3-0001 Analysis of thermoset systems by high (EN 6040) performance liquid chromatography (HPLC)  AITM 3-0002 Analysis of non metallic material (uncured) by differential scanning	
(EN 6040) performance liquid chromatography (HPLC)  AITM 3-0002 Analysis of non metallic material High Qualified 2015 QCS10106	
calorimetry (DSC)	
AITM 3-0004 Determination of gel time and viscosity Low Qualified (EN 6043)	
of smoke generated by aircraft interior Proceed technical te	ion granted based in satisfactory est witnessing. Authorisation to completion of PTP.
AITM 3-0008 Determination of the extent of cure by High Qualified 2015 QCS10106 (EN 6064) differential scanning calorimetry (DSC)	65
AITM 3-0027 Determination of the melting behaviour and the extent of cristallinity of semi-cristalline materials by differential scanning calorimetry (DSC)  High Authorised to Proceed Proceed December 2015	ling
AITM 4-0005 Macroscopic and microscopic Low Qualified examination of fiber reinforced plastics	
ASTM C363 Node tensile strength of honeycomb core Low Qualified materials	
ASTM C365 Flatwise compressive properties of Low Qualified sandwich cores	
ASTM C393 Core shear properties of sandwich constructions by beam flexure	
ASTM D1781 Climbing drum peel for adhesives Low Qualified	
ASTM D6641 Compressive properties of polymer matrix composite materials using a combined loading compression (CLC) test fixture	
EN 2243-2 Structural adhesives - Part 2: Peel metal- Low Authorised to 2016 Proceed December 2016	
EN 2243-3 Structural adhesives - Part 3: Peeling test Low Authorised to Proceed December 2015	

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EN 2243-4	Structural adhesives - Part 4: Metal- honeycomb core flatwise tensile test	Low	Authorised to Proceed December 2015	2015	
EN 2377 (ISO 14130)	Glass fibre reinforced plastics - Determination of apparent interlaminar shear strength	Low	Qualified		Composite
EN 2558	Carbon fibre preimpregnates - Determination of the volatile content	Low	Qualified		
EN 2561	Carbon Fibre reinforced plastics - Unidirectional laminates - Tensile test parallel to the fibre direction	Low	Qualified	2016	Composite
EN 2562	Carbon fibre reinforced plastics - Unidirectional laminates - Flexural test parallel to the fibre direction	Low	Qualified	2015	Composite
EN 2563	Carbon fibre reinforced plastics - Unidirectional laminates - determination of apparent interlaminar shear strength	Low	Qualified	2015	
EN 2564	Carbon fibre laminates - Determination of the fibre, resin and void contents	Low	Qualified	2015	Also according to IGC 04.26.230
EN 2746	Glass fibre reinforced plastics - Flexural test - Three point bend method	Low	Qualified	2015	Composite
EN 2850-B (Pren) (ISO 14126-2)	Carbon fibre thermosetting resin unidirectional laminates - Compression test parallel to fibre direction - Method B	Low	Qualified	2015	
EN 827	Adhesives - Determination of conventional solids content and constant mass solids content	Low	Qualified		
ISO 11357-2	Plastics - Differential scanning calorimetry (DSC) -Part 2: Determination of glass transition	Low	Qualified		
ISO 11357-3	Plastics - Differential scanning calorimetry (DSC) - Part 3: Determination of temperature and enthalpy of melting and crystallization	Low	Qualified		
ISO 11358	Plastics - Thermogravimetry (TG) of polymers	Low	Qualified		Composite
ISO 1183-1	Plastics - Methods for determining the density of non-cellular plastics - Part 1: Immersion method, liquid pyknometer method and titration method	Low	Qualified		Composite (A) Plastiques
ISO 14125	Fiber reinforced plastic composites - Determination of flexural properties	Low	Qualified		
ISO 178	Plastics – Determination of flexural properties	Low	Qualified		

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Société par actions simplifiée au capital de 2.704.375 Euros RCS Toulouse 383 474 81

1. rond-point Maurice Bellonte 31700 Blagnac, France



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ISO 1923	Cellular plastics and rubbers - Determination of linear dimensions	Low	Qualified		
ISO 2409	Paints and varnishes - Cross-cut test	Low	Qualified	2015	
ISO 4578	Adhesives - Determination of peel resistance of high-strength adhesive bonds - Floating roller method	Low	Qualified		
ISO 527-5	Determination of tensile properties - Part 5: Test conditions for unidirectional fibre-reinforced plastic composites	Low	Qualified	Com	nposite
ISO 604	Plastics - Determination of compressive properties	Low	Qualified		
ISO 844	Rigid cellular plastics - Determination of compression properties	Low	Qualified		
ISO 9227 (ASTM B117)	Corrosion tests in artificial atmospheres - Salt spray tests	Low	Qualified	2015	

<sup>\*</sup> Unless otherwise specified, last issue of the standard shall apply.

<sup>\*\*</sup> Next PTP participation year is given for information - It is the External Shop's responsibility to check every year on the PTP Website (https://ptp.exova.com/) which kits are proposed.