



# Testing Laboratory Approval

## for Independent Laboratory

MEMO N°: AM-LAB-004-16 Rev.0

Approval Date : 30 June 2016

Revision Date : N/A

SUBJECT: INDEPENDENT TESTING LABORATORY APPROVAL

SCOPE: Processes Control and Materials Incoming Testing

**REFERENCE DOCUMENTATION:**

CASA1400 Rev.2	Airbus DS Doc.	Qualification and Certification of Processes.
CASA-1400-55-FT Rev. 2	Airbus DS Doc.	Laboratories Approval
2016-TAQO-0092	Airbus DS Doc.	Airbus DS audit
QTR Ref N° C5510001 Ed. 1	APPLUS+ Doc.	IQTR Testing Laboratory Approval

# APPLUS+

Laboratory Facilities  
P.I. "Las Cárcavacas"  
C/ Historia esq. C/ Romanos  
45200 ILLESCAS (España)

is hereby approved like:

## INDEPENDENT TESTING LABORATORY

### According to CASA-1400-55-FT

**LIMITATIONS:**

N/A

**REMARKS:**

Airbus Defense and Space does not consider as valid any deviation not expressly stated in this document.

The Qualification Dossier shall be maintained by the supplier (APPLUS+) as process owner.

	Name	Signature
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**SCOPE:**

<b>Laboratory Facilities</b>	
<b>Test</b>	<b>Specification</b>
Fibre reinforced plastics - Determination of in-plane shear properties ( $\pm 45^\circ$ tensile test)	AITM 1-0002 (ISO 14129)
Determination of the glass transition temperatures (DMA)	AITM 1-0003
Fibre reinforced plastics - Determination of interlaminar fracture toughness energy - Mode I - G <sub>Ic</sub>	AITM 1-0005
Fibre reinforced plastics - Determination of plain, open hole and filled hole tensile strength	AITM 1-0007-A / B / C / D
Fiber reinforced plastics - Determination of plain compression strength	AITM 1-0008-A1 / A2
Fiber reinforced plastics - Determination of open hole or filled hole compression strength	AITM 1-0008-B / C / D
Determination of tensile lap shear strength of composite joints	AITM 1-0019
Fiber reinforced plastics - Flatwise tensile test of composite sandwich panel	AITM 1-0025
Carbon fibre reinforced plastics - Determination of fracture toughness energy of bonded joints - Mode I - G <sub>Ic</sub>	AITM 1-0053
Water pick up test-method to determine the impregnation level of prepeg materials	AITM 2-0061
Analysis of non-metallic material (uncured) by differential scanning calorimetry (DSC)	AITM 3-0002
Determination of the extent of cure by differential scanning calorimetry (DSC)	AITM 3-0008 (EN 6064)
Determination of the melting behaviour and the extend of cristallinity of semi-cristalline materials by differential scanning calorimetry (DSC)	AITM 3-0027
Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials	ASTM D790
Standard Test Method for Climbing Drum Peel for Adhesives	ASTM D1781
Tensile Properties of Polymer Matrix Composite Materials	ASTM D3039
Strength Properties of Double Lap Shear Adhesive Joints by Tension Loading	ASTM D3528
G <sub>Ic</sub>	ASTM D5528
Standard Test Method for Flexural Properties of Polymer Matrix Composite Materials	ASTM D7264
Assignment of the Glass Transition Temperature by Modulated Temperature Differential Scanning Calorimetry MDSC	ASTM E2602
Ensayo de cortadura interlaminar sobre estratificados de fibra de carbono	I+D-E 031
Structural Adhesives Test Methods Part 1 - Single Lap Shear, Aerospace Series	EN 2243-1

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Structural adhesives - Part 3: Peeling test metal-honeycomb core	EN 2243-3 (QVA Z10 46 05 & I+D-E-130)
Glass fibre reinforced plastics - Determination of apparent interlaminar shear strength	EN 2377 (ISO 14130)
Carbon fibre preimpregnates - Determination of mass per unit area	EN 2557
Carbon fibre preimpregnates - Determination of volatile content	EN 2558
Carbon fibre preimpregnates - Test method for the determination of the resin and fibre content and the mass of fibre per unit area	EN 2559
Carbon fibre preimpregnates - Determination of the resin flow	EN 2560
Carbon fibre reinforced plastics. Unidirectional laminates. Tensile test parallel to the fibre direction	EN 2561
Carbon fibre reinforced plastics - Unidirectional laminates - Flexural test parallel to the fibre direction	EN 2562
Carbon fibre reinforced plastics - Unidirectional laminates - determination of apparent interlaminar shear strength	EN 2563
Aerospace series - Carbon fibre laminates - Determination of the fibre, resin and void contents	EN 2564
Carbon Fibre reinforced plastics - Unidirectional laminates - Tensile test perpendicular to the fibre direction	EN 2597
Glass fibre reinforced plastics - Flexural test - Three point bend method	EN 2746
Glass fibre reinforced plastics - Tensile test	EN 2747
Carbon fibre thermosetting resin unidirectional laminates - Compression test parallel to fibre direction - Method B	EN 2850-B (ISO 14126-2)
Glc	EN 6033
Analysis of non-metallic materials (cured) for the determination of the extent of cure by Differential Scanning Calorimetry (DSC)	EN 6064
Plastics - Determination of tensile properties	ISO 527
Determination of compressive properties	ISO604
Flatwise Tensile Test on carbon fiber/honeycomb core laminated	I+D-E-246
Ensayos físicos sobre preimpregnados y laminados de fibra de aramida/resina epoxi	I+D-E-123
Adhesive – Determination of density	EN542
Assignment of the Glass Transition Temperature by Modulated Temperature Differential Scanning Calorimetry	ASTM E2602