

LGAI TECHNOLOGICAL CENTER SA

APPLUS

RD DE LA FONT DEL CAME SN

08193, BELLATERRA

ES

286347

TYPE of External Shop

**INDEPENDENT**

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

Dear Madam, Dear Sir,

We herewith inform that the couples as detailed in the Appendix have been either registered or modified in the Official Airbus Qualified Test Methods List (QTML).

The latest valid status of all qualified couples is published by regular QTML reports :

- On Airbus homepage for Suppliers (<https://www.airbus.com/be-an-airbus-supplier.html>)- Only Independent Labs.
- On Airbus Supply Portal - All External Test Facilities.

A qualified couple is not linked to a specific product. It is the evidence that the External Test Facility is meeting the requirement of the M20691.2: Perform Couple Compliance and Maturity's Activities for Material Products Suppliers and/or M20691.3: Perform Couple Compliance and Maturity's Activities for Aerostructure Parts Suppliers.

- We ask you to inform AIRBUS about any modification which could affect the current qualification(s).

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, including the surveillance activities (PTP results, Nadcap accreditation, etc)
- Evidence Of non-compliance with the M20691.2 and/or M20691.3
- Loss of Airbus Supplier Approval
- Stop of the Business

Yours faithfully,  
The Test Method Central Team

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

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

Registered office:  
1, rond-point Maurice Bellonte  
31700 Blagnac, France

## Test Methods (TM) as listed in Airbus Commercial Aircraft QTML for LGAI TECHNOLOGICAL CENTER SA - (286347)

Test Standard(s)*	Test label	Complexity	Qualification Status	Limitation	Next External comparison test Participation. **	Technical Qualification Reference	Deviation Reference	Last Qualification Update date
ISO1519	PAINTS AND VARNISHES - BEND TEST (CYLINDRICAL MANDREL)	LOW	QUALIFIED					
AITM1-0010	FIBRE REINFORCED PLASTICS DETERMINATION OF COMPRESSION STRENGTH AFTER IMPACT	HIGH	QUALIFIED		2022	131074		
AITM1-0007	FIBRE REINFORCED PLASTICS DETERMINATION OF PLAIN HOLE TENSILE STRENGTH COUNTERSUNK HEAD	LOW	QUALIFIED WITH LIMITATIONS	Limited to Type A3 & A4	2023			
ISO6270-1	PAINTS AND VARNISHES - DETERMINATION OF RESISTANCE TO HUMIDITY - PART 1: CONTINUOUS CONDENSATION	LOW	QUALIFIED					
EN3615	AEROSPACE SERIES - FIBRE REINFORCED PLASTICS - DETERMINATION OF THE CONDITIONS OF EXPOSURE TO HUMID ATMOSPHERE AND OF MOISTURE ABSORPTION	LOW	QUALIFIED					
ASTMG110	STANDARD PRACTICE FOR EVALUATING INTERGRANULAR CORROSION RESISTANCE OF HEAT TREATABLE ALUMINUM ALLOYS BY IMERSION IN SODIUM CHLORIDE + HYDROGEN PEROXIDE SOLUTION	LOW	QUALIFIED					

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EN6072	CONSTANT AMPLITUDE FATIGUE TESTING	HIGH	QUALIFIED WITH LIMITATIONS	TEST ONLY - SPECIMEN MACHINING NOT ALLOWED	2022			02/05/2022
ASTME384	TEST METHODE FOR MICROHARDNESS OF MATERIALS	LOW	QUALIFIED		2023			
ISO6506	METALLIC MATERIALS - BRINELL HARDNESS TEST	LOW	QUALIFIED		2023			
ISO6508	METALLIC MATERIALS - ROCKWELL HARDNESS TEST	LOW	QUALIFIED		2023			
ISO6507	METALLIC MATERIALS - VICKERS HARDNESS TEST	LOW	QUALIFIED		2023			
EN2002-2	TENSILE TESTING AT ELEVATED TEMPERATURE	LOW	QUALIFIED		2022			

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ASTME407	TEST METHODE FOR MICROETCHING OF METALS AND ALLOYS	LOW	QUALIFIED					
ASTME112	STANDARD TEST METHODS FOR DETERMINING AVERAGE GRAIN SIZE	LOW	QUALIFIED		2023			
ASTME45	STANDARD TEST METHODS FOR DETERMINING THE INCLUSION CONTENT OF STEEL	LOW	QUALIFIED		2022			
AITM1-0025	FIBER REINFORCED PLASTICS FLATWISE TENSILE TEST OF COMPOSITE SANDWICH PANEL	LOW	QUALIFIED		2023			
EN2243-4	STRUCTURAL ADHESIVES METAL-HONEYCOMB-CORE FLATWISE TENSILE TEST	LOW	QUALIFIED		2023			
ASTMB769	STANDARD TEST METHOD FOR SHEAR TESTING OF ALUMINUM ALLOYS	LOW	QUALIFIED					

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Test Standard(s)*	Test label	Complexity	Qualification Status	Limitation	Next External comparison test Participation. **	Technical Qualification Reference	Deviation Reference	Last Qualification Update date
AITM1-0029	DETERMINATION OF TENSILE STRENGTH OF TAPERED OR STEPPED JOINTS	LOW	QUALIFIED					
EN2002-1	TENSILE TESTING AT AMBIENT TEMPERATURE	LOW	QUALIFIED		2023			
EN2378	AEROSPACE SERIES - FIBRE REINFORCED PLASTICS - DETERMINATION OF WATER ABSORPTION BY IMMERSION	LOW	QUALIFIED					
ASTME340	TEST METHODE FOR MACROETCHING OF METALS AND ALLOYS	LOW	QUALIFIED					
ASTMA604	STANDARD PRACTICE FOR MACROETCH TESTING OF CONSUMABLE ELECTRODE REMELTED STEEL BARS AND BILLETS	LOW	QUALIFIED					
ASTME111	STANDARD TEST METHOD FOR YOUNG'S MODULUS TANGENT MODULUS AND CHORD MODULUS	HIGH	AUTHORISED TO PROCEED-28/02/2021					

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Test Standard(s)*	Test label	Complexity	Qualification Status	Limitation	Next External comparison test Participation. **	Technical Qualification Reference	Deviation Reference	Last Qualification Update date
EN2002-6	METALLIC MATERIALS: BEND TESTING	LOW	QUALIFIED					
ASTME399	STANDARD TEST METHOD FOR PLAIN STRAIN FRACTURE TOUGHNESS OF METALLIC MATERIALS	HIGH	QUALIFIED		2022	171305		
ASTME647	STANDARD TEST METHOD FOR MEASUREMENT OF FATIGUE CRACK GROWTH RATES	HIGH	QUALIFIED WITH LIMITATIONS	RESTRICTED TO TEST ONLY CT SPECIMENS.	2023	QCS 150083 - ISSUE 3,150083		15/04/2022
AITM1-0042	DETERMINATION OF FATIGUE CRACK GROWTH RATES FOR CLAD SHEET AND CLAD PLATE UP TO 12 MM IN CONSTANT-LOAD-AMPLITUDE TESTS	HIGH	QUALIFIED WITH LIMITATIONS	*RESTRICTED TO TEST ONLY CT SPECIMENS.	2021	150083		21/04/2022
EN6018	DETERMINATION OF DENSITY ACCORDING TO DISPLACEMENT METHODE	LOW	QUALIFIED					
ISO4516	METALLIC AND OTHER INORGANIC COATINGS - VICKERS AND KNOOP MICROHARDNESS TESTS	LOW	QUALIFIED					

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EN3114	AEROSPACE SERIES - MICROSTRUCTURE OF (A+?) TITANIUM ALLOYS WROUGHT PRODUCTS - PART?1 2 3 AND 4	LOW	QUALIFIED					
EN3683	AEROSPACE SERIES - TEST METHODS - TITANIUM ALLOY WROUGHT PRODUCTS - DETERMINATION OF PRIMARY A CONTENT - POINT COUNT METHOD AND LINE INTERCEPT METHOD	LOW	QUALIFIED					
EN3684	AEROSPACE SERIES - TEST METHODS - TITANIUM ALLOYS WROUGHT PRODUCTS - DETERMINATION OF ? TRANSUS TEMPERATURE - METALLOGRAPHIC METHOD	LOW	QUALIFIED					
AITM4-0002	MICROSTRUCTURAL CHARACTERIZATION OF WELDED ALUMINIUM STRUCTURES	LOW	QUALIFIED					
EN2003-9	AEROSPACE SERIES - TEST METHODS - TITANIUM AND TITANIUM ALLOYS - PART 009: DETERMINATION OF SURFACE CONTAMINATION	LOW	QUALIFIED WITH LIMITATIONS	Method B only	2023			
ASTMG34	STANDARD PRACTICE FOR EVALUATING EXFOLIATION CORROSION SUSCEPTIBILITY IN 2XXX AND 7XXX SERIES ALUMINIUM ALLOYS	LOW	QUALIFIED					

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ISO3651-1	DETERMINATION OF RESISTANCE TO INTERGRANULAR CORROSION OF STAINLESS STEELS - PART 1: AUSTENITIC AND FERRITIC-AUSTENITIC (DUPLEX) STAINLESS STEELS - CORROSION TEST IN NITRIC ACID MEDIUM BY MEASUREMENT OF LOSS IN MASS (HUEY TEST)	LOW	QUALIFIED					
ISO3651-2	DETERMINATION OF RESISTANCE TO INTERGRANULAR CORROSION OF STAINLESS STEELS - PART 2: FERRITIC AUSTENITIC AND FERRITIC-AUSTENITIC (DUPLEX) STAINLESS STEELS - CORROSION TEST IN MEDIA CONTAINING SULFURIC ACID	LOW	QUALIFIED					
ASTMG66	STANDARD PRACTICE FOR VISUAL ASSESMENT OF EXFOLIATION CORROSION SUSCEPTIBILITY OF 5XXX SERIES ALUMINUM ALLOYS (ASSET TEST)	LOW	QUALIFIED					
ASTMG67	STANDARD PRACTICE FOR DETERMINING SUCSEPTIBILITY TO INTERGRANULAR CORROSION RESISTANCE OF 5XXX SERIES ALUMINUM ALLOYS BY MASS LOSS AFTER EXPOSURE TO NITRIC ACID (NAMLT TEST)	LOW	QUALIFIED					
ASTMG112	STANDARD GUIDE FOR CONDUCTING EXFOLIATION CORROSION TESTS IN ALUMINUM ALLOYS	LOW	QUALIFIED					
EN2667-2	STRUCTURAL ADHESIVES COMPRESSIVE TUBE SHEAR	LOW	QUALIFIED					

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AITM1-0018	SANDWICH FLEXURAL TEST 4-POINT BENDING	LOW	QUALIFIED					
AITM1-0065	FIBER REINFORCED PLASTICS DETERMINATION OF JOINT STRENGTH OF MECHANICALLY FASTENED JOINTS	HIGH	QUALIFIED		2022	181306		
AITM1-0066	FIBRE REINFORCED PLASTICS - DETERMINATION OF PULL-OUT/ PULL-THROUGH STRENGTH ON RIVETED JOINTS	LOW	QUALIFIED					
ISO2178	NON-MAGNETIC COATINGS ON MAGNETIC SUBSTRATES; MEASUREMENT OF COATING THICKNESS; MAGNETIC METHOD	LOW	QUALIFIED					
ISO3887	STEELS NON-ALLOY AND LOW-ALLOY - DETERMINATION OF DEPTH OF DECARBURIZATION	LOW	QUALIFIED		2023			
AITM1-0067	DETERMINATION OF TENSION THROUGH THE HOLE STRENGTH ON FASTENED JOINTS	LOW	QUALIFIED					

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ISO643	STEELS - MICROGRAPHIC DETERMINATION OF THE APPARENT GRAIN SIZE	LOW	QUALIFIED		2022			
ISO4624	PAINTS AND VARNISHES - PULL-OFF TEST FOR ADHESION	LOW	QUALIFIED					
AITM1-0008	FIBRE REINFORCED PLASTICS DETERMINATION OF FILLED HOLE COMPRESSION STRENGTH COUNTERSUNK HEAD	HIGH	QUALIFIED WITH LIMITATIONS	*Limited to type A3		130469		
ASTMC273	STANDARD TEST METHOD FOR SHEAR PROPERTIES OF SANDWICH CORE MATERIALS	LOW	QUALIFIED					
ASTMC365	STANDARD TEST METHOD FOR FLATWISE COMPRESSIVE PROPERTIES OF SANDWICH CORES	LOW	QUALIFIED					
AITM4-0005	MACROSCOPIC AND MICROSCOPIC EXAMINATION OF FIBER REINFORCED PLASTICS	LOW	QUALIFIED					

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ASTME21	STANDARD TEST METHODS FOR ELEVATED TEMPERATURE TENSION TESTS OF METALLIC MATERIALS	LOW	QUALIFIED		2022			
ASTME10	STANDARD TEST METHOD FOR BRINELL HARDNESS OF METALLIC MATERIALS	LOW	QUALIFIED		2023			
ASTME18	STANDARD TEST METHODS FOR ROCKWELL HARDNESS OF METALLIC MATERIALS	LOW	QUALIFIED		2023			
ASTME8	STANDARD TEST METHODS FOR TENSION TESTING OF METALLIC MATERIALS	LOW	QUALIFIED		2023			
ISO6892	METALLIC MATERIALS - TENSILE TESTING - PART 1: METHOD OF TEST AT ROOM TEMPERATURE PART 2: METHOD OF TEST AT ELEVATED TEMPERATURE PART 3: METHOD OF TEST AT LOW TEMPERATURE	LOW	QUALIFIED WITH LIMITATIONS	Limited to room temperature	2023			

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