

ELEMENT MATERIALS TECHNOLOGY

TOULOUSE

3 AVENUE ANDRE MARIE AMPERE

31770, COLOMIERS

FR

147019

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

Registered office:  
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31700 Blagnac, France

## Test Methods (TM) as listed in Airbus Commercial Aircraft QTML for ELEMENT MATERIALS TECHNOLOGY - (147019)

Test Standard(s)*	Test label	Complexity	Qualification Status	Limitation	Next External comparison test Participation. **	Technical Qualification Reference	Deviation Reference	Last Qualification Update date
ISO148-1	METALLIC MATERIAL - CHARPY PENDULUM IMPACT TEST	LOW	QUALIFIED WITH LIMITATIONS	Not qualified for lateral expansion / At room temperature: Absorbed Energy only	2022			
ASTMG34	STANDARD PRACTICE FOR EVALUATING EXFOLIATION CORROSION SUSCEPTIBILITY IN 2XXX AND 7XXX SERIES ALUMINUM ALLOYS	LOW	QUALIFIED					
ISO9227	CORROSION TESTS IN ARTIFICIAL ATMOSPHERES - SALT SPRAY TESTS	LOW	AUTHORISED TO PROCEED-30/09/2022		2022			
ISO2409	PAINTS AND VARNISHES - CROSS-CUT TEST	LOW	QUALIFIED		2022			
ISO2808	PAINTS AND VARNISHES - DETERMINATION OF FILM THICKNESS	LOW	QUALIFIED		2022			
ISO2812-2	PAINTS AND VARNISHES - DETERMINATION OF RESISTANCE TO LIQUIDS - PART 2: WATER IMMERSION METHOD	LOW	QUALIFIED		2022			

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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
ASTMG110	STANDARD PRACTICE FOR EVALUATING INTERGRANULAR CORROSION RESISTANCE OF HEAT TREATABLE ALUMINUM ALLOYS BY IMERSION IN SODIUM CHLORIDE + HYDROGEN PEROXIDE SOLUTION	LOW	QUALIFIED					
ASTME647	STANDARD TEST METHOD FOR MEASUREMENT OF FATIGUE CRACK GROWTH RATES	HIGH	QUALIFIED WITH LIMITATIONS	CT and MT Specimens	2023	QCS131401		
EN6072	CONSTANT AMPLITUDE FATIGUE TESTING	HIGH	QUALIFIED		2023			
EN3665	TEST METHODS FOR PAINTS AND VARNISHES - FILIFORM CORROSION RESISTANCE TEST ON ALUMINIUM ALLOYS	LOW	QUALIFIED					
ASTME399	STANDARD TEST METHOD FOR PLAIN STRAIN FRACTURE TOUGHNESS OF METALLIC MATERIALS	HIGH	QUALIFIED		2022	171304		
ISO6508	METALLIC MATERIALS - ROCKWELL HARDNESS TEST	LOW	QUALIFIED		2023			

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ASTME112	STANDARD TEST METHODS FOR DETERMINING AVERAGE GRAIN SIZE	LOW	QUALIFIED		2022			
ASTMG44	STANDARD PRACTICE FOR EXPOSURE OF METALS AND ALLOYS BY ALTERNATE IMMERSION IN NEUTRAL 3.5% SODIUM CHLORIDE SOLUTION	HIGH	QUALIFIED		2023	151182		
EN2002-1	TENSILE TESTING AT AMBIENT TEMPERATURE	LOW	QUALIFIED		2023			
ASTME3	STANDARD GUIDE FOR PREPARATION OF METALLOGRAPHIC SPECIMENS	LOW	QUALIFIED					
AITM1-0049	GLARE MATERIAL. TENSILE TEST	LOW	QUALIFIED					
EN2002-6	METALLIC MATERIALS: BEND TESTING	LOW	QUALIFIED					

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EN2832	HYDROGEN EMBRITTLEMENT OF STEELS; NOTCHED SPECIMEN TEST	LOW	QUALIFIED		2022			
ASTMB769	STANDARD TEST METHOD FOR SHEAR TESTING OF ALUMINUM ALLOYS	LOW	QUALIFIED					
AITM1-0047	GLARE MATERIAL. INTERLAMINAR SHEAR TEST	LOW	QUALIFIED					
ASTME9	STANDARD TEST METHODS OF COMPRESSION TESTING OF METALLIC MATERIALS AT ROOM TEMPERATURE	LOW	QUALIFIED		2023			
AITM1-0048	GLARE MATERIAL. COMPRESSION TEST	LOW	QUALIFIED					
ASTME238	STANDARD TEST METHOD FOR PIN-TYPE BEARING TEST OF METALLIC MATERIALS	HIGH	QUALIFIED		2023	151194		

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AITM1-0059	GLARE MATERIAL. IN-PLANE-SHEAR PROPERTIES	LOW	QUALIFIED					
ASTME45	STANDARD TEST METHODS FOR DETERMINING THE INCLUSION CONTENT OF STEEL	LOW	QUALIFIED		2023			
ASTME407	TEST METHODE FOR MICROETCHING OF METALS AND ALLOYS	LOW	QUALIFIED					
ASTME340	TEST METHODE FOR MACROETCHING OF METALS AND ALLOYS	LOW	QUALIFIED					
EN2003-9	AEROSPACE SERIES - TEST METHODS - TITANIUM AND TITANIUM ALLOYS - PART 009: DETERMINATION OF SURFACE CONTAMINATION	LOW	QUALIFIED		2023			
ISO1463	MEASUREMENT OF COATING THICKNESS - MICROSCOPICAL METHODE	LOW	QUALIFIED		2022			

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ISO2360	NON-CONDUCTIVE COATINGS ON NON-MAGNETIC ELECTRICALLY CONDUCTIVE BASIS MATERIALS - MEASUREMENT OF COATING THICKNESS - AMPLITUDE-SENSITIVE EDDY CURRENT METHOD	LOW	QUALIFIED		2022			
ISO2819	METALLIC COATINGS ON METALLIC SUBSTRATES; ELECTRODEPOSITED AND CHEMICALLY DEPOSITED COATINGS; REVIEW OF METHODS AVAILABLE FOR TESTING ADHESION	LOW	QUALIFIED					
NASM1312-1	FASTENER TEST METHODS SALT SPRAY	LOW	QUALIFIED					
NASM1312-4	FASTENER TEST METHODS LAP JOINT SHEAR TEST COMPOSITE	LOW	QUALIFIED					
NASM1312-12	FASTENER TEST METHODS THICKNESS OF METALLIC COATINGS	LOW	QUALIFIED					
AITM1-0050	GLARE MATERIAL. OPEN HOLE TENSILE STRENGTH	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
ASTMB117	STANDARD PRACTICE FOR OPERATING SALT SPRAY (FOG) APPARATUS	LOW	QUALIFIED		2022			
ISO643	STEELS - MICROGRAPHIC DETERMINATION OF THE APPARENT GRAIN SIZE	LOW	QUALIFIED		2022			
ASTMG47	STANDARD TEST METHOD FOR DETERMINING SUSCEPTIBILITY TO STRESS-CORROSION CRACKING OF 2XXX AND 7XXX ALUMINUM ALLOY PRODUCTS	HIGH	QUALIFIED		2023	151182		
ASTMG49	STANDARD PRACTICE FOR PREPARATION AND USE OF DIRECT TENSION STRESS-CORROSION TEST SPECIMENS	HIGH	QUALIFIED		2023	151182		
ASTME8	STANDARD TEST METHODS FOR TENSION TESTING OF METALLIC MATERIALS	LOW	QUALIFIED		2023			
ISO4287	GEOMETRICAL PRODUCT SPECIFICATION (GPS) - SURFACE TEXTURE: PROFILE METHOD - TERMS DEFINITIONS AND SURFACE TEXTURE PARAMETERS	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
ISO4288	GEOMETRICAL PRODUCT SPECIFICATIONS (GPS) - SURFACE TEXTURE: PROFILE METHOD - RULES AND PROCEDURES FOR THE ASSESSMENT OF SURFACE TEXTURE	LOW	QUALIFIED					
ASTMF2111A	STANDARD PRACTICE FOR MEASURING INTERGRANULAR ATTACK OR END GRAIN PITTING ON METALS CAUSED BY AIRCRAFT CHEMICAL PROCESSES	LOW	QUALIFIED					
ASTME111	STANDARD TEST METHOD FOR YOUNG'S MODULUS TANGENT MODULUS AND CHORD MODULUS	HIGH	AUTHORISED TO PROCEED-31/12/2021					
ASTMB213	STANDARD TEST METHODS FOR FLOW RATE OF METAL POWDERS USING THE HALL FLOW METER FUNNEL	LOW	QUALIFIED		2023			
ASTMB214	SIEVE ANALYSIS OF METAL POWDERS	LOW	QUALIFIED		2023			
ASTMB215	STANDARD PRACTICES FOR SAMPLING METAL POWDERS	LOW	QUALIFIED					

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ASTMB417	APPARENT DENSITY OF NON-FREE-FLOWING METAL POWDERS USING THE CARNEY FUNNEL	LOW	QUALIFIED		2023			
ASTMB527	STANDARD TEST METHOD FOR DETERMINATION OF TAP DENSITY OF METALLIC POWDERS AND COMPOUNDS	LOW	QUALIFIED		2023			
ASTMB822	STANDARD TEST METHOD FOR PARTICLE SIZE DISTRIBUTION OF METAL POWDERS AND RELATED COMPOUNDS BY LIGHT SCATTERING	LOW	QUALIFIED		2022			
ISO13320	PARTICLE SIZE ANALYSIS ? LASER DIFFRACTION METHODS	LOW	QUALIFIED		2022			
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		2023			
AITM1-0040	RESIDUAL STRESS MEASUREMENT FOR METALLIC PLATES	LOW	QUALIFIED WITH LIMITATIONS	PART 2 only (Hole drilling method) with Type A rosette / Tests on specimens not included				

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ISO6506	METALLIC MATERIALS - BRINELL HARDNESS TEST	LOW	SUSPENDED	Suspended: 22.02.19				
ISO6507	METALLIC MATERIALS - VICKERS HARDNESS TEST	LOW	SUSPENDED	Suspended: 22.02.19				
NASM1312-8	FASTENER TEST METHODS TENSILE STRENGTH	LOW	SUSPENDED	No participation to the PTP 2020 - Vu avec Julien Vignot				

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