

## ELEMENT MATERIALS TECHNOLOGY

CLEVELAND

5405 EAST SCHAAF ROAD

44131, CLEVELAND

US

298998

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>

\* Next PTP participation year is given for information - It is the External Shop's responsibility to check every year on the PTP Website which kits are proposed.

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Airbus SAS  
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

## EX-SITU

### Test Methods (TM) as listed in Airbus Commercial Aircraft QTML for ELEMENT MATERIALS TECHNOLOGY - (298998)

Test Standard(s)	Test label	Surveillance Sub Family	Complexity	Qualification Status	Limitation	Next External comparison test Participation.*	Technical Qualification Reference	Deviation Reference	Last Qualification Update date
AITM4-0002	MICROSTRUCTURAL CHARACTERIZATION OF WELDED ALUMINIUM STRUCTURES	MICROSCOPY	LOW	QUALIFIED					11/03/2024
ASTMA262	STANDARD PRACTICES FOR DETECTING SUSCEPTIBILITY TO INTERGRANULAR ATTACK IN AUSTENITIC STAINLESS STEELS	CORROSION	LOW	QUALIFIED					28/11/2022
ASTMA604	STANDARD PRACTICE FOR MACROETCH TESTING OF CONSUMABLE ELECTRODE REMELTED STEEL BARS AND BILLETS	MICROSCOPY	LOW	QUALIFIED					28/11/2022
ASTMB487	TEST METHOD FOR MEASUREMENT OF METAL AND OXIDE COATING THICKNESSES BY MICROSCOPICAL EXAMINATION OF A CROSS-SECTION	MICROSCOPY	LOW	QUALIFIED WITH LIMITATIONS	MICROSCOPIE NOT APPLIED ON FASTENER	2027			28/11/2022
ASTMB645	STANDARD PRACTICE FOR LINEAR-ELASTIC PLANE-STRAIN FRACTURE TOUGHNESS TESTING OF ALUMINUM ALLOYS	FRACTURE	HIGH	QUALIFIED		2027			20/04/2026
ASTME10	STANDARD TEST METHOD FOR BRINELL HARDNESS OF METALLIC MATERIALS	HARDNESS	LOW	QUALIFIED		2026			21/11/2022

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ASTME1019	STANDARD TEST METHOD FOR DETERMINATION OF CARBON, SULFUR, NITROGEN, AND OXYGEN IN STEEL, IRON, NICKEL, AND COBALT ALLOYS BY VARIOUS COMBUSTION AND FUSION TECHNIQUES	COMPOSITION	LOW	AUTHORISED TO PROCEED-30/09/2026		2025			17/10/2025
ASTME112	STANDARD TEST METHODS FOR DETERMINING AVERAGE GRAIN SIZE	GRAIN SIZE	LOW	QUALIFIED		2027			29/10/2025
ASTME139	STANDARD TEST METHODS FOR CONDUCTING CREEP, CREEP-RUPTURE AND STRESS-RUPTURE TESTS OF METALLIC MATERIALS	CREEP	LOW	QUALIFIED		2026			19/02/2025
ASTME1409	STANDARD TEST METHOD FOR DETERMINATION OF OXYGEN AND NITROGEN IN TITANIUM AND TITANIUM ALLOYS BY THE INERT GAS FUSION TECHNIQUE	SPECTROSCOPY	LOW	AUTHORISED TO PROCEED-30/04/2026		2024			04/10/2023
ASTME1447	STANDARD TEST METHOD FOR DETERMINATION OF HYDROGEN IN TITANIUM AND TITANIUM ALLOYS BY THE INERT GAS FUSION THERMAL CONDUCTIVITY/ INFRARED DETECTION METHOD	HYDROGEN CONTENT	LOW	QUALIFIED		2025			30/10/2025

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ASTME18	STANDARD TEST METHODS FOR ROCKWELL HARDNESS OF METALLIC MATERIALS	HARDNESS	LOW	QUALIFIED		2026			21/11/2022
ASTME2371	STANDARD TEST METHOD FOR ANALYSIS OF TITANIUM AND TITANIUM ALLOYS BY ATOMIC EMISSION PLASMA SPECTROMETRY	SPECTROSCOPY	LOW	AUTHORISED TO PROCEED-30/04/2026		2025			15/01/2024
ASTME290	STANDARD TEST METHODS FOR BEND TESTING OF MATERIAL FOR DUCTILITY	FLEXURE	LOW	QUALIFIED					17/10/2025
ASTME3	STANDARD GUIDE FOR PREPARATION OF METALLOGRAPHIC SPECIMENS	MANUFACTURING	LOW	QUALIFIED					28/11/2022
ASTME3061	STANDARD TEST METHOD FOR ANALYSIS OF ALUMINUM AND ALUMINUM ALLOYS BY INDUCTIVELY COUPLED PLASMA ATOMIC EMISSION SPECTROMETRY (PERFORMANCE BASED METHOD)	SPECTROSCOPY	LOW	AUTHORISED TO PROCEED-31/05/2026		2026			05/07/2024
ASTME340	STANDARD PRACTICE FOR MACROETCHING METALS AND ALLOYS	MICROSCOPY	LOW	QUALIFIED					21/11/2022

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ASTME399	STANDARD TEST METHOD FOR PLAIN STRAIN FRACTURE TOUGHNESS OF METALLIC MATERIALS	FRACTURE	HIGH	QUALIFIED		2027	180692		20/12/2022
ASTME407	TEST METHODE FOR MICROETCHING OF METALS AND ALLOYS	MICROSCOPY	LOW	QUALIFIED					21/11/2022
EN2002-1	TENSILE TESTING AT AMBIENT TEMPERATURE	TENSILE	LOW	QUALIFIED WITH LIMITATIONS	LIMITATION 1: YOUNG'S MODULUS NOT INCLUDED / - ALL ALLOYS LIMITATION 2: INTERCHANGEABILITY PER 19772-ICY-CS NOTE- 2 WAYS WITH ASTM B 557 AND ASTM E8	2026			29/09/2023
EN2002-6	METALLIC MATERIALS: BEND TESTING	FLEXURE	LOW	QUALIFIED					20/04/2026
EN2003-10	AEROSPACE SERIES - TITANIUM AND TITANIUM ALLOYS - TEST METHODS - PART 010: SAMPLING FOR DETERMINATION OF HYDROGEN CONTENT	MANUFACTURING	LOW	QUALIFIED		2025			20/04/2026
EN2003-9	AEROSPACE SERIES - TEST METHODS - TITANIUM AND TITANIUM ALLOYS - PART 009: DETERMINATION OF SURFACE CONTAMINATION	MICROSCOPY	LOW	QUALIFIED WITH LIMITATIONS	"LIMITED TO METHOD "A"	2027			23/08/2023

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ISO148-1	METALLIC MATERIAL - CHARPY PENDULUM IMPACT TEST	IMPACT	LOW	QUALIFIED WITH LIMITATIONS	ONLY AT ROOM TEMPERATURE	2027			20/09/2023
SAEAMS2315	DETERMINATION OF DELTA FERRITE CONTENT	MICROSCOPY	LOW	QUALIFIED					20/04/2026

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ASTME34	STANDARD TEST METHODS FOR CHEMICAL ANALYSIS OF ALUMINUM AND ALUMINUM-BASE ALLOYS	SPECTROSCOPY	LOW	WITHDRAWN						12/04/2024
ASTME8	STANDARD TEST METHODS FOR TENSION TESTING OF METALLIC MATERIALS	TENSILE	LOW	WITHDRAWN	- FLAT COUPON TESTING NOT AUTHORISED / - YOUNG'S MODULUS NOT INCLUDED					24/03/2023
EN10276	DETERMINATION FO OXYGENIN STEEL AND IRON.	CONTENT	LOW	WITHDRAWN	THE COMPOSITION OF SULFUR ELEMENT (S) CAN NOT BE DETERMINED UNDER 0.0002% BY COMBUSTION	2024				20/04/2026

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