



# Bombardier Approval Letter

March 23<sup>rd</sup>, 2018

**BOMBARDIER**  
the evolution of mobility

SAP Supplier no: **132176**  
SAP Notification no: 1000059279

TITANIA ENSAYOS Y PROYECTOS INDUSTRIALES  
PARQUE TECHNOLOGICO TECNOBAHIA  
EDIFICIO RETSE NAVE 4  
EL PUERTO DE SANTA MARIA, Cadiz  
Spain, 11500

Attention: Vanesa Aragón, Quality Manager.  
Subject: **Approval Letter**

Mrs. Aragón,

Bombardier is pleased to inform you that TITANIA ENSAYOS Y PROYECTOS INDUSTRIALES located at the above noted address, is now approved and holds the following Bombardier approvals:

- BAERD-GEN-018 fields 1a, 1b, 2a, 2b, 3a, 3b, 3c, 3d, 3e, 3f, 4a, 4b, 4c, 5a, 5e, 6  
Please see Appendix 1 for complete list of tests.

This approval will be maintained on the condition that your company continues to comply with QD 4.6-40, Quality Requirements for Suppliers, and maintains acceptable product delivery performance.

Bombardier Quality may elect to audit your facility at any time during or prior to any contract, in order to:

- Assure continuing compliance with contractual and quality requirements.
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Sincerely yours,

**Caroline Des Landes**

Professionnel d'ingénierie / Engineering Professional  
Assurance Qualité Fournisseur / Supplier Quality Assurance  
400 Côte Vertu ouest, Dorval, QC, H4S 1Y9

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**Appendix 1**

Specification Number	Title	Test Field
BATS 5076	SEALING EFFICIENCY	1B
BATS 5410	ETCH RATE	1B
BATS 5532	COATING WEIGHT DETERMINATION	1B
BATS 5073	COPPER SULPHATE SPOT TEST	1B
BATS 3000	TENSION TESTING OF METALLIC MATERIALS	2A
BATS 3001	CALCULATION OF YIELD STRENGTH	2A
BATS 3002	CALCULATION OF PERCENT ELONGATION	2A
BATS 3003	CALCULATION OF PERCENT REDUCTION OF AREA	2A
BATS 3460	TENSILE SHEAR STRENGTH FOR ADHESIVE SYSTEMS	2A
BATS 3488	PEEL STRENGTH FOR SEALANTS	2A
ASTM E8	STANDARD TEST METHODS FOR TENSION TESTING OF METALLIC MATERIALS	2A
BATS 2312	DETERMINATION OF DUCTILITY OF METALLIC MATERIALS BY BENDING TEST	2A
BATS 2753	BEND TESTING OF WELDS	2A
BATS 3400	TENSILE STRENGTH OF NON-METALLIC MATERIALS	2A
BATS 3401	CALCULATION OF THE TENSILE MODULUS (LAMINATE)	2A
BATS 3405	FLATWISE TENSILE TEST FOR ADHESIVE SYSTEMS	2A
BATS 3480	PEEL STRENGTH BY CLIMBING DRUM METHOD	2A
BATS 3461	SHEAR STRENGTH FOR SEALANTS	2A
BATS 3471	DOUBLE OVERLAP TENSILE SHEAR STRENGTH FOR ADHESIVE SYSTEMS	2A
BATS 3464	INTERLAMINAR SHEAR STRENGTH BY SHORT BEAM METHOD TEST OF COMPOSITE MATERIALS	2A
BATS 3423	FLATWISE COMPRESSION, HONEYCOMB, (UNSTABILIZED, DRY)	2A
BATS 3123	FLATWISE COMPRESSION, HONEYCOMB STABILIZED, DRY	2A
BATS 3391	TUBE SHEAR STRENGTH OF STRUCTURAL FOAMING ADHESIVES	2A
BATS 3020	SHEAR TEST (DOUBLE) OF ALUMINUM ALLOY RIVETS, WIRE AND RODS	2A
BATS 3080	CHARPY IMPACT TESTING OF METALLIC MATERIALS	2B
BATS 2543	KNIFE CUT DEFECT EVALUATION	3
BATS 2545	EVALUATION OF INTERGRANULAR ATTACK AND END GRAIN PITTING	3
BATS 6100	PREPARATION OF METALLOGRAPHIC SPECIMENS	3
BATS 2425	INTERGRANULAR OXIDATION OF STEELS, DEPTH EVALUATION OF	3A
BATS 2463	THICKNESS MEASUREMENT BY MICROSCOPICAL EXAMINATION OF A CROSS SECTION	3A, 3B, 3C
BATS 2501	GRAIN SIZE DETERMINATION (ALUMINUM ALLOYS)	3B
BATS 2520	HYDROGEN POROSITY (HTO) OF HEAT-TREATED ALUMINUM ALLOYS, EVALUATION BY MICROEXAMINATION	3B
BATS 2521	EUTECTIC MELTING (EM), OF HEAT-TREATED ALUMINUM ALLOYS, EVALUATION BY MICROEXAMINATION	3B
BATS 2522	DIFFUSION OF CORE (CD) IN CLAD ALUMINUM ALLOYS, EVALUATION BY MICROEXAMINATION	3B
BATS 2525	SUSCEPTIBILITY TO INTERGRANULAR CORROSION (STIC TEST) OF ALUMINUM ALLOYS, EVALUATION BY MICROEXAMINATION	3B

CTS 2550	OPTICAL MICROSCOPIC EVALUATION OF THE ANODIC COATING THICKNESS	3B
BATS 2561	SURFACE CONTAMINATION OF TITANIUM ALLOYS, METALLURGICAL EXAMINATION	3C
BATS 2381	METHOD FOR ROCKWELL AND ROCKWELL SUPERFICIAL HARDNESS TESTING OF METALLIC MATERIALS	3D
BATS 2385	MICROHARDNESS, TESTING OF METALLIC MATERIALS, GENERAL PROCEDURES	3D
BATS 2755	SEAM WELDING, METALLURGICAL EXAMINATION	3E
BATS 2756	SPOT WELDING, METALLURGICAL EXAMINATION	3E
BATS 2751	GROOVE WELD, EXAMINATION FOR WELDER QUALIFICATION	3E
BATS 2752	FILLET WELD, EXAMINATION FOR WELDER QUALIFICATION	3E
BATS 2356	TEST METHOD FOR EXAMINATION AND CALCULATION OF VOID CONTENT IN COMPOSITE LAMINATES, MONOLITHIC AND SANDWICH CONSTRUCTIONS	3F
BATS 3211	SURFACE ROUGHNESS, METHOD FOR MEASURING	4A
BATS 4314	SPECIFIC GRAVITY OF SEALANTS	4A
BATS 4315	STANDARD AND FLUID IMMERSED CURING RATE OF SEALANTS	4A
BATS 4317	TACK FREE TIME OF SEALANT	4A
BATS 4334	FLOW/SLUMP OF SEALANTS	4A
BATS 4335	NON-VOLATILE CONTENT OF SEALANTS	4A
BATS 4337	APPLICATION TIME OF SEALANTS	4A
BATS 4338	ASSEMBLY TIME OF SEALANTS	4A
BATS 4061	PREPREG RESIN CONTENT, PHENOLIC	4A
BATS 4262	VOLATILE CONTENT OF ADHESIVE FILM	4A
BATS 4264	GEL TIME, ADHESIVE RESIN FILM	4A
BATS 4265	AREAL WEIGHT OF ADHESIVE FILM	4A
BATS 4461	AREAL WEIGHT CALCULATION OF STRUCTURAL FOAMING ADHESIVES	4A
BATS 4462	VOLATILE CONTENT OF STRUCTURAL FOAMING ADHESIVES	4A
BATS 4510	FIBER VOLUME, FIBERGLASS LAMINATE	4A
BATS 4551	CURED PLY THICKNESS OF FIBERGLASS LAMINATES	4A
BATS 4561	RESIN CONTENT OF PREIMPREGNATED FIBERGLASS CLOTH	4A
BATS 4562	VOLATILE CONTENT, PREIMPREGNATED FIBERGLASS CLOTH	4A
BATS 4564	GEL TIME, PREIMPREGNATED FIBERGLASS CLOTH	4A
BATS 4565	AREAL WEIGHT CALCULATION, PREIMPREGNATED FIBERGLASS CLOTH	4A
BATS 4712	CURED PLY THICKNESS OF COMPOSITE LAMINATES	4A
BATS 4761	RESIN CONTENT OF PREIMPREGNATED FIBERGLASS CLOTH	4A
BATS 4762	VOLATILE CONTENT, PREIMPREGNATED CLOTH	4A
BATS 4962	VOLATILE CONTENT, PREIMPREGNATED FIBERGLASS CLOT	4A
BATS 4385	VISCOSITY OF SEALANTS, BROOKFIELD VISCOMETER	4B
BATS 4031	GLASS TRANSITION TEMPERATURE (Tg) - DETERMINATION USING MECHANICAL ANALYZER (DMA)	4B
BATS 4263	RESIN FLOW, ADHESIVE RESIN FILM	4B
BATS 4563	RESIN FLOW, PREIMPREGNATED FIBERGLASS CLOTH	4B
BATS 4663	RESIN FLOW, PREIMPREGNATED ORGANIC FIBER EPOXY RESIN	4B
BATS 4463	EXPANSION RATIO OF STRUCTURAL FOAMING ADHESIVE	4C
BATS 5570	CORROSION RESISTANCE BY SALT SPRAY (FOG) TESTING	5A
BATS 4002	COATING THICKNESS DETERMINATION BY NON DESTRUCTIVE PROCEDURE	5E

BATS 4817	DRYING TIME OF ORGANIC COATINGS	5E
BATS 4830	NON-VOLATILE CONTENT OF ORGANIC COATINGS	5E
BATS 4860	PAINT ADHESION, TAPE TEST	5E
BATS 4866	IMPACT RESISTANCE OF ORGANIC COATINGS	5E
BATS 4823	COLOUR OF PIGMENTED COATINGS	5E
BATS 4864	ADHESION OF APPLIED COATINGS BY SCRAPE ADHESION	5E
BATS 2333	VISUAL EXAMINATION	N/A
BATS 6304	SEALANT - PREPARATION OF PEEL STRENGTH PANELS	Test field 6



Bombardier Approval Letter  
Added Scope

April 22<sup>nd</sup>, 2019

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TITANIA ENSAYOS Y PROYECTOS INDUSTRIALES  
PARQUE TECHNOLOGICO TECNOBAHIA  
EL PUERTO DE SANTA MARIA, Cadiz  
11500  
Spain

SAP Supplier no: **132176**  
SAP Notification no: 1000061689

Attention: Fernando Serrano  
Subject: **Approval Letter**

Mr. Serrano,

Bombardier is pleased to inform you that TITANIA ENSAYOS Y PROYECTOS INDUSTRIALES located at the above noted address, is now approved and holds the following Bombardier approvals:

- BAERD-GEN-018 field 6 for BATS 6203 - PREPARATION OF COUPONS FOR TENSILE SHEAR OF ADHESIVE SYSTEMS
- BAERD-GEN-018 field 4A for BATS 4710 - FIBER VOLUME, GRAPHITE LAMINATE

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Approvisionnement Bombardier Aéronautique / Bombardier Procurement Aerospace  
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