

Schedule of Accreditation

issued by

United Kingdom Accreditation Service

2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

 <p>9373</p> <p>Accredited to ISO/IEC 17025:2017</p>	<h3>Resonate Testing Limited</h3> <p>Issue No: 011 Issue date: 25 August 2022</p>	
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<p>Testing performed at the above address only</p>		

DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
<p>GENERAL AND NON-EXPLOSIVE STORES AND EQUIPMENT including:</p> <p>Aerospace Structures, Materials & Equipment Agricultural Equipment Construction Plant, Equipment, Products and Materials Computers & Peripherals Domestic Appliances Electrical/Electronic Components, Connectors & Products Electro-Mechanical Devices Fire-fighting and Detection equipment Hydraulic equipment and fitting Loaded Containers Marine Equipment Mechanical products and plant Medical devices and components Mining Equipment Missile Sub-Assemblies and Components Motor Vehicles Accessories & Components Office Equipment Packages & Packaging Material Plastics and Products Pressure vessels Radar Equipment Radio & Television Equipment Rail and Rolling stock equipment and components Safety Appliances & Equipment Satellites & Sub-Assemblies</p>	<p>ENVIRONMENTAL TESTS (non-explosive items)</p> <p>Dynamic tests Single Parameters</p> <p>VIBRATION-Sinusoidal</p> <p>Freq range: 5-2500 Hz Peak Thrust: 54 kN Max pk/pk displacement: 100mm</p> <p>Temp range:-50°C to+120°C (max ramp rate 10°C/min) 10%-98% rh (depending on temperature range) 1 m x 1.13 m x 1.08 m</p> <p>VIBRATION-Random</p> <p>Freq range: 5-2500 Hz Peak RMS thrust: 54 kN Max pk/pk displacement: 100mm</p> <p>Temp range:-50°C to+120°C (max ramp rate 10°C/min) 10%-98% rh (depending on temperature range) 1 m x 1.13 m x 1.08 m</p>	<p>IEC EN 60068-2-6:2007 IEC EN 60068-2-6:1995 IEC EN 60068-2-50:2000 IEC EN 60068-2-51:2000 IEC EN 60068-2-53:2010 RTCA/DO-160C to G Section 8 MIL STD 810 G (2014) 514.7 MIL STD 810 H 514.8 MIL STD 810 G 520.3 MIL STD 810 G (2014) 520.4 MIL STD 810 H 520.5 ISO 16750-3:2012 Tests III, IX (Table 16)</p> <p>QS000296:Issue 01 In house procedure for combined climatic and dynamic testing</p> <p>IEC EN 60068-2-64:2008+A1:2019 IEC EN 60068-2-64:2008 IEC EN 60068-2-64:1995 IEC EN 60068-2-53:2010 RTCA/DO-160C to G Section 8 MIL STD 810 G (2014) 514.7 MIL STD 810 H 514.8 MIL STD 810 G 520.3 MIL STD 810 G (2014) 520.4 MIL STD 810 H 520.5 ISO 16750-3:2012 Tests IV, V, VII, VIII</p>



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<p>GENERAL AND NON-EXPLOSIVE STORES AND EQUIPMENT including: (cont'd)</p> <p>Security Devices & Alarms Structures and components Shipping Containers & Systems Sub-sea equipment & components Telecommunications Equipment Thermal imaging Unit Loads Unitised Loads Weapons and Sub-Assemblies</p>	<p>ENVIRONMENTAL TESTS (non-explosive items) (cont'd)</p> <p>Dynamic testing</p> <p>Shock Classical shock with half sine, terminal peak sawtooth, trapezoidal, Shock Responsive Spectrum (SRS) Ambient temperature</p> <p>Half Sine Severity: 100g Minimum pulse width: 6ms Maximum pulse width: 20ms</p> <p>Sawtooth Severity: 100g Minimum pulse width: 6ms Maximum pulse width: 20ms</p> <p>Trapezoid Severity: 50g Minimum pulse width: 11ms Maximum pulse width: 18ms</p> <p>Triangular Severity: 80g Minimum pulse width: 6ms Maximum pulse width: 20ms</p> <p>Temp range:-50°C to+120°C (max ramp rate 10°C/min) 10%-98% rh (depending on temperature range) 1 m x 1.13 m x 1.08 m</p> <p>Dynamic Testing</p> <p>Drop Test (Free Fall)</p> <p>Max Mass of item - 200kg Max Drop Height - 3.05m</p>	<p>IEC EN 60068-2-27:2008 IEC EN 60068-2-53:2010 RTCA/DO-160 C to G Section 7 MIL STD 810 G (2014) 516.7 MIL STD 810 H 516.8 MIL STD 810 G 520.3 MIL STD 810 G (2014) 520.4 MIL STD 810 H 520.5 ISO 16750-3:2012</p> <p>QS000296:Issue 01 In house procedure for combined climatic and dynamic testing</p> <p>MIL STD 810 G 516.7 MIL STD 810 H 516.8 Transit Drop Procedure IV</p>



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GENERAL AND NON-EXPLOSIVE STORES AND EQUIPMENT (cont'd)	<p>Climatic tests : -</p> <p>Humidity, steady state</p> <p>Temp range:-75°C to+180°C (max ramp rate 10°C/min) 10%-98% (depending on temperature range) 1 m x 1.13 m x 1.08 m</p> <p>Temp range:-40°C to+180°C (max ramp rate 3°C/min) 10%-98%rh (depending on temperature range) 0.66 m x 0.53 m x 0.42 m</p> <p>High Temp - Low Humidity -constant and cyclic</p> <p>Temp range:-70°C to+180°C (max ramp rate 10°C/min) 1 m x 1.13 m x 1.08 m</p> <p>Temp range:-40°C to+180°C (max ramp rate 3°C/min) 0.66 m x 0.53 m x 0.42 m</p> <p>Temp range:+20°C to+200°C 0.76 m x 0.66 m x 0.86 m</p> <p>Temp range:-70°C to+180°C (max ramp rate 5°C/min) 0.95 m x 1.05 m x 0.9 m</p> <p>Low temperature – constant and cyclic</p> <p>Temp range:-70°C to +180°C (max ramp rate 10°C/min) 1 m x 1.13 m x 1.08 m</p> <p>Temp range:-40°C to+180°C (max ramp rate 3°C/min) 0.66 m x 0.53 m x 0.42 m</p> <p>Temp range:-70°C to +180°C (max ramp rate 5°C/min) 0.95 m x 1.05 m x 0.9 m</p>	<p>IEC 60068-2-67:1995 Part 2-67: Tests - Test Cy: IEC 60068-2-78:2012 Part 2-78: Tests – Test Cab RTCA DO 160 C to G Section 6 MIL STD 810G 507.5 MIL STD 810G (2014) 507.6</p> <p>IEC/EN 60068-2-2:2007 Test B: IEC/EN 60068-2-14:2009 Test Nb RTCA DO 160 C TO G - Section 4.0 - Section 5.0 MIL STD 810G 501.5 MIL STD 810G (2014) 501.6 MIL STD 810H 501.7 DEF STAN 00-35 Part 3 - Test CL1 - Test CL2</p> <p>IEC/EN 60068-2-1:2007 Part 2-1: Tests - Test A: Cold IEC/EN 60068-2-14:2009 Test Nb RTCA DO 160C-G: - Section 4.0 - Section 5.0 MIL STD 810G 502.5 MIL STD 810G (2014) 502.6 MIL STD 810H 502.7 DEF STAN 00-35 (Part3) - Test CL4 - Test CL5</p>



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GENERAL AND NON-EXPLOSIVE STORES AND EQUIPMENT (cont'd)	<p>Climatic tests (cont'd)</p> <p>Combined temperature and Humidity cyclic</p> <p>Temp range:-70°C to+180°C (max ramp rate 10°C/min) 10%-98% (depending on temperature range) 1 m x 1.13 m x 1.08 m</p> <p>Temp range:-40°C to+180°C (max ramp rate 3°C/min) 10%-98%rh (depending on temperature range) 0.66 m x 0.53 m x 0.42 m</p> <p>Temperature and altitude</p> <p>Temp range:-70°C to+180°C Maximum altitude: 100,000ft (max ramp rate 5°C/min) 0.95 m x 1.05 m x 0.9 m</p> <p>Thermal Shock Two chamber method & Automated transfer.</p> <p>Temp range:-70°C to+180°C 0.95 m x 1.05 m x 0.9 m</p>	<p>IEC/EN 60068-2-30:2005 Part 2-30: Test Db</p> <p>IEC/EN 60068-2-38:2009 Part 2-38: Test Z/AD</p> <p>IEC/EN 60068-2-78:2012 Part 2-78: Test Cab</p> <p>MIL STD 810G 507.5</p> <p>MIL STD 810G (2014) 507.6</p> <p>RTCA DO160 C to G Section 6.0</p> <p>DEF STAN 00-35</p> <ul style="list-style-type: none"> - Test CL6 - Test CL7 <p>QS000297: Issue 01 in house method Combined temperature humidity cycling test</p> <p>IEC/EN 60068-2-13:1983 Part 2- Test M</p> <p>IEC/EN 60068-2-39:2015 Part 2-39:</p> <p>MIL STD 810G 500.5</p> <p>MIL STD 810G (2014) 500.6</p> <p>MIL STD 810G 520.3</p> <p>MIL STD 810G (2014) 520.4</p> <p>MIL STD 810H 520.5</p> <p>DEF STAN 00-35 (Part3)</p> <ul style="list-style-type: none"> - Test CL11 - Test CL12 - Test CL21 <p>RTCA DO 160C-G:</p> <ul style="list-style-type: none"> - Section 4.0 <p>IEC 60068-2-14:2009</p> <p>MIL STD 810G 503.5</p> <p>MIL STD 810G (2014) 503.6</p> <p>MIL STD 810H 503.7</p> <p>DEF STAN 00-35 (Part3)</p> <ul style="list-style-type: none"> - Test CL14 <p>RTCA DO 160C-G Section 5.0</p>



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GENERAL AND NON-EXPLOSIVE STORES AND EQUIPMENT (cont'd)	<p>Climatic tests (cont'd)</p> <p>CORROSION RESISTANCE Salt spray / Salt mist</p> <p>Salt Mist + cyclic Max temperature : +70 Max Humidity : 100%rh Chamber size 2600 litres</p>	<p>RTCA/DO 160 F and G section 14 Salt Fog EUROCAE ED-14 G section 14</p> <p>MIL-STD-810 Method 509 DEF STAN 00-35 Part 3 Iss 4 Method CN2 DEF STAN 00-035: Part 3 Iss 5 Method CN 2 ASTM B117-19 ASTM B117:2003 ASTM B117:2009 ASTM B117:2011 ASTM B117:2016 BS EN ISO 9227:2012 BS EN IEC 60068-2-52:2018 BS EN IEC 60068-2-11:1999 EN 248: Para 5.1 BS 7479:1991 ISO 9227:1990 ISO 9227:2006 ISO 9227:2012 IEC 60068-2-11:1981 DIN 50021:1988 JIS Z2371:1994</p>
GENERAL MATERIALS FOR AIRCRAFT INTERIORS – seat cushion	Flammability Test	<p>DOT/FAA/AR-00/12 – FAA FIRE TEST HANDBOOK Chapter 7: Seat Cushion Flammability (CS/FAR 25.853)</p>
GENERAL MATERIALS FOR AIRCRAFT INTERIORS – Ceiling & Sidewall Liner Panels Class C Compartments	Flammability Test	<p>DOT/FAA/AR-00/12 – FAA FIRE TEST HANDBOOK Chapter 8: Cargo Liner Burnthrough (CS/FAR 25.855)</p>



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<p>AIRCRAFT POWERPLANT COMPONENTS including:</p> <p>All firewall components Shrouds Cowling and Nacelle Skins Hoses and hose assemblies Fluid Assemblies</p>	<p>Fire Penetration Fire Resistance Fire Proof</p>	<p>QS00118 In House Powerplant Fire test method covering:</p> <p>FAA AC20-135 FAA engineering report 3A ISO2685 (1990 & 1998) DOT/FAA/AR-00/12:FAA FIRE TEST HANDBOOK – Chapter 12 DOT/FAA/AR-00/12:FAA FIRE TEST HANDBOOK – Chapter 11 SAE AS1055 SAE AIR/AS1377 SAE AS4273 (CS/FAR 25.867, 25.865, 25,1181, 25.1191, 25.1183, 25.1193, FAR 33.17, CS-E-130) TSO C140, TSO C53A, TSO C75 RTCA DO-160 G Section 26</p>
<p>GENERAL MATERIALS FOR AIRCRAFT INTERIORS</p>	<p>Flammability – Vertical</p> <p>Flammability – Horizontal</p> <p>Flammability – 45 degrees</p>	<p>DOT/FAA/AR-00/12:FAA FIRE TEST HANDBOOK – Chapter 1 (CS/FAR 25.853 and 25.855)</p> <p>DOT/FAA/AR-00/12:FAA FIRE TEST HANDBOOK – Chapter 3 (CS/FAR 25.853)</p> <p>DOT/FAA/AR-00/12:FAA FIRE TEST HANDBOOK – Chapter 2</p>
<p>END</p>		