

Schedule of Accreditation

issued by

United Kingdom Accreditation Service

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

 4294 Accredited to ISO/IEC 17025:2017	QinetiQ Group plc Issue No: 022 Issue date: 09 October 2023	
	Environmental Test Centre MoD Shoeburyness Southend-on-Sea Essex SS3 9SR	Contact: Gareth Williams Tel: +44 (0) 1702 383402 Mob: +44 (0) 7385 026190 E-Mail: GAWILLIAMS5@qinetiq.com kshah@qinetiq.com Website: www.qinetiq.com

Testing performed at the above address only

DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
Hazardous items including but not limited to: Ammunition Explosives and Propellants Firearms Fuses: Weapons Missile Components Missiles: Guided Missiles: Unguided Rocket Motors Weapons and Sub-assemblies Aerospace Components and Equipment Non-hazardous items including but not limited to: Aerospace Structures Casting Compressors Computers, Peripherals and other IT Equipment Electrical/Electronic Components Connectors and Products Generators: Electrical Power and Welding Hydraulic Equipment and fittings Marine Equipment Medical/Dental Equipment	ENVIRONMENTAL TESTS Environmental Testing, particularly on dangerous substances under the subdivisions of the Explosives Class 1 of the UN Dangerous Goods Classification system: Climatic Testing: 2000 kg HD 1.1 1350 kg HD 1.2.1 2000 kg HD 1.2.2 3000 kg HD 1.3 Unlimited HD 1.4 Dynamic Testing: 1000 kg HD 1.1 1000 kg HD 1.2.1 2000 kg HD 1.2.2 2000 kg HD 1.3 Unlimited HD 1.4 Computed Radiographic Testing : 400 kg HD 1.1 250 kg HD 1.2.1 1000 kg HD 1.2.2 2000 kg HD 1.3 Unlimited HD 1.4	



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Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
Office Equipment: Electrical and Mechanical Radar Equipment Radio and TV Equipment Safety Equipment and Appliances Security Equipment Sonar Equipment Telecommunications Equipment	<u>Climatic: Single Parameters:</u> High Temperature: Max Temperature: + 100 °C Max Chamber Size: 2.5 m x 3.0 m x 9.0 m	DEF STAN 00-35 Iss 4, 2006: CL1 & CL2 DEF STAN 00-035 Iss 5, 2017: CL 1 & CL2 MIL STD 810 E, 1989: 501 F, 2000: 501 G, 2010: 501 AECTP 302 BS EN 60068 2007: -2-2: Bb
	Low Temperature: Min Temperature: - 60 °C Max Chamber Size: 2.5 m x 3.0 m x 9.0 m	DEF STAN 00-35 Iss 3, 1999: CL5 Iss 4, 2006: CL5 DEF STAN 00-035 Iss 5, 2017: CL5 MIL STD 810 E, 1989: 502 F, 2000: 502 G, 2010: 502 AECTP 303 BS EN 60068 1993: -2-1: Ab 2007: -2-1: Ab
	Humidity: - Steady State + 20 °C to + 80 °C Humidity Range: 10% RH to 98% RH Max Chamber Size: 2.5 m x 3.0 m x 9.0 m	DEF STAN 00-35 Iss 4, 2006: CL7 DEF STAN 00-035 Iss5, 2017: CL 7 MIL STD 810 E, 1989: 507 F, 2000: 507 G, 2010: 507 AECTP 306 BS EN 60068 2013: -2-78: Cab



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As listed above:-	<u>Climatic: Single Parameters:</u> (cont'd) Humidity: - Cyclic Temperature Range: + 10 °C to + 80 °C Humidity Range: 10% RH to 98% RH Max Chamber Size: 2.5 m x 3.0 m x 9.0 m	DEF STAN 00-35 Iss 4, 2006: CL6 DEF STAN 00-035 Iss 5, 2017: CL6 MIL STD 810 E, 1989: 507 F, 2000: 507 G, 2010: 507 AECTP 307 BS EN 60068 2007: -2-1: A
	Pressure, Low: Minimum pressure: 3.4 kPa (34mb) (equivalent altitude 23760) Maximum chamber size: 2.2 m x 2.2 m x 5.1 m	DEF STAN 00-35 Iss 4, 2006: CL21 DEF STAN 00-035 Iss 5, 2017: CL11 MIL STD 810 E, 1989: 500 (I & II) F, 2000: 500 (I & II) G, 2010: 500 (I & II) AECTP 312 BS EN 60068 1999: -2-13 2000: -2-40
	Water - mist: Maximum Plan Area 3.0 m x 4.0 m	DEF STAN 00-35: Iss 4, 2006: CL26 DEF STAN 00-035 Iss 5, 2017: CL26
	Water – rain Maximum Plan Area: 3.0 m x 4.0 m	DEF STAN 00-35 Iss 4, 2006: CL27 DEF STAN 00-035 Iss 5, 2017: CL27 AECTP Method 310 Procedure I



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As listed above:-	<u>Climatic: Single Parameters:</u> (cont'd) Water - immersion only Pressure over water - maximum simulated depth 65 m Tank size: 1.2 m x 0.7 m x 0.6 m (deep)	DEF STAN 00-35 Iss 4, 2006: CL29 DEF STAN 00-035 Iss 5, 2017: CL29 MIL STD 810 E, 1989: 512 F, 2000: 512 G, 2010: 512 BS EN 60068 2001: -2-18: Rc
	Water - sealing Tank size: 0.6 m x 0.6 m x 1.2 m (long)	DEF STAN 00-35 Iss 4, 2006: CL30 DEF STAN 00-035 Iss 5, 2017: CL30 1-05 Sealing - Annex A.2.1 BS EN 60068 1995: -2 - 17
	Icing: Maximum chamber size: 2.0 m x 2.0 m x 4.0 m (high)	DEF STAN 00-35 Iss 4, 2006: CL10 (A) DEF STAN 00-035 Iss 5, 2017: CL10(A) MIL STD 810 E, 1989: 521 F, 2000: 521 G, 2010: 521 AECTP 311
	Salt Corrosive Atmospheres: Salt Mist Maximum Plan Area: 3.0 m x 4.0 m	DEF STAN 00-35 Iss 4, 2006: CN2 DEF STAN 00-035 Iss 5, 2017: CN2 BS EN 60068 1996: -2-52: 2018: -2-52



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As listed above:-	<u>Climatic: Single Parameters:</u> (cont'd) Contamination: Fluid Maximum Temperature: + 80 °C Maximum Conditioning Chamber Size: 1.8 x 1.8 x 2.3 m (high)	DEF STAN 00-35 Iss 4, 2006: CN4 DEF STAN 00-035 Iss 5, 2017: CN4 MIL STD 810 E, 1989: 504 F, 2000: 504 G, 2010: 504 AECTP 314 BS EN 60068 2000: -2-74: Xc 2000 + A1: 2018 -2-74



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Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
As listed above:-	Thermal Shock: Maximum Temperature: +80°C Minimum Temperature: -60°C Maximum Chamber Sizes: Cold 2.5m x 3.0m x 9.0m	DEF STAN 00-35 Iss 4, 2006: CL14 Procedure A DEF STAN 00-035 Iss 5, 2017: CL14 Procedure A MIL STD 810 E, 1989: 503.3 F, 2000: 503.4 G, 2010: 503.5 AECTP 304 BS EN 60068 2009: -2-14: Na
	<u>Rapid Decompression</u> Minimum pressure: 3.4kPa (34mb) (equivalent altitude 23,760m) Maximum chamber size: 380 mm x 380 mm x 1100 mm	DEF STAN 00-35 Iss 4, 2006: CL9 (Rapid) DEF STAN 00-035 Iss 5, 2017: CL9 (Rapid) MIL STD 810 E, 1989: 500 (Proc III) F, 2000: 500 (Proc III) G, 2010: 500 AECTP 312 (Proc III)
	<u>Climatic: combined parameters:</u> Temperature/Low Pressure Temperature range: - 60 °C to + 80 °C Minimum Pressure: 3.4 kPa (34 mb) (equivalent altitude 23760 m) Maximum chamber size: 2.2m x 2.2m x 5.1m	DEF STAN 00-35 Iss 4, 2006: CL11, 12,13 DEF STAN 00-035 Iss 5, 2017: CL11, 13 MIL STD 810 E, 1989: 500 F, 2000: 500 G, 2010: 500 AECTP 312 BS EN 60068 1999: -2-39 2000: -2-40



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Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
As listed above:-	<u>Vibration: modes of</u> Single axis (single or twin shaker) or Multi-axis Vibration Systems Sinusoidal Random Narrow band Random-on-Random Sine-on-Random Swept Sine-on-Random Swept Random-on-Random Gunfire Time History Replication Classical Shock Pulses Bump Restrained Cargo Electro-Dynamic capabilities: total 7 systems Maximum values: Thrust: 160kN - Sine 160kN - Random Frequency Range: - 5 to 3000Hz Displacement: 100mm pk-pk (Shock) Load Support: Header 1363kg Load Bearing Platform. 3500kg Temperature Conditioning: - 60 °C to + 100 °C Thermal Enclosure: approximately 2m x 2m x 6m	DEF STAN 00-35 Iss 4, 2006 M1, M2, M3 DEF STAN 00-035 Iss 5, 2017: M1, M2, M3, M19 MIL STD 810 E, 1989: 514, 519 F, 2000: 514.5, 519.5 G, 2010: 514.6, 519.6 AECTP 401, 405 BS EN 60068 1996: -2-6: Fc 2008: -2-6: Fc 2000: -2-50: Z/AFc 2000: -2-51: Z/BFc 2010: -2-53 2000: -2-57: Ff 2013: -2-57: Ff 1993: -2-59: Fe 1995: -2-64 2008: -2-64 2005: -2-80: Fi



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Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
As listed above:-	<u>Shock (free fall): modes of</u> Half Sine Trapezoidal Terminal Peak Sawtooth Free fall shock capabilities: Systems Maximum values: Half Sine: 200 g - Load 1360 kg Table size 1.5 m x 1.5 m Trapezoidal : 100 g - Load 1360 kg - Table size 1.5 m x 1.5 m Temperature Pre-Conditioning: - 60 °C to + 60 °C	DEF STAN 00-35 Iss 4, 2006 M3, M6, M7 DEF STAN 00-035 Iss 5, 2017: M3, M7 MIL STD 810 E, 1989: 516 F, 2000: 516 G, 2010: 516 AECTP 403 BS EN 60068 2009: -2-27 2003: -2-81
	<u>Impact - Vertical & Horizontal</u> Free fall: total 3 Systems Horizontal Impact: total 1 System Maximum values: Vertical Impact: Drop Height: 15m Item Mass: 2,400kg Size of Drop Plate: 2m x 3m Horizontal Impact: Item Mass: 1940kg Impact Surface: Steel Plate Plate Size: 1.5m x 3.0m Bounce Maximum Mass: 2700kg Maximum size: 3.0m x 1.75m Temperature Pre-Conditioning: - 60 °C to + 90 °C for All Impact - Vertical & Horizontal and Bounce	DEF STAN 00-35 Iss 4, 2006 M4, M5, M11 DEF STAN 00-035 Iss 5, 2017: M4, M5, M11 AECTP 413 (I & II) BS EN 60068 1997: -2-31 2008: -2-31



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As listed above:-	<u>Climatic / Dynamic - Combined Parameters</u> Temperature / Vibration / Shock Maximum Test Parameters: Temperatures: - 60 °C to + 90 °C Thermal Enclosure: 2.0 m x 2.0 m x 6.0 m	DEF STAN 00-35 Iss 4, 2006 M1 DEF STAN 00-035 Iss 5, 2017: M1 MIL STD 810 E, 1989: 514 519 F, 2000: 514 519 G, 2010: 514 519 AECTP 401, 403 BS EN 60068 2000: -2-50: Z/AFc 2000: -2-51: Z/BFc 2010: -2-53 2008: -2-6: Fc 2009: -2-27 1995: -2-64 2008: -2-64 2005: -2-80: Fi



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As listed above:-		
Rocket motors, detonators, propellant samples, 40mm rounds, warheads as part of their environmental test programme	Non-destructive test; Computed Radiography (CR) X-Ray Static 40Kev to 320 KeV X-Ray Mobile 40 KeV to 300 KeV Linear Accelerator 6 MeV X-ray Computed Tomography scanning 450 KeV and 300 Kev microfocus X-ray tube , Properties measured – geometry, X-ray attenuation of material Digital Radiography (DR) 300 KeV and 450 KeV, microfocus X-ray tube Properties measured – geometry, X-ray attenuation of material	Documented and agreed by the customer 'In-house' methods to suit the customers requirements
END		