Environmental Test Laboratory

Alphatech Ltd
Green House
Homefield Road Industrial Estate
Haverhill
Suffolk
CB9 8QP

Environmental Test Capabilities

2645

Certificate number GB 03/58524

Introduction:

This brochure describes the objectives and capabilities of Alphatech's Environmental Test Facility.

Alphatech was established in 1997 and has an excellent reputation for the sales, service and repair of both new and used Environmental test equipment.
During April of 2002, Alphatech moved into purpose built premises that included an area assigned for an environmental test facility.
This was a long-term growth plan for Alphatech, one of the objectives being to provide a 'Best in Class' Test House Facility to meet and support its ongoing Customer's test requirements.

In February of 2003, Alphatech was assessed and certified as meeting the requirements of ISO 9001:2000.
In July of 2004, Alphatech was granted UKAS Test Laboratory Accreditation to ISO/IEC 17025.

A further extension to our Scope of Accreditation was granted by UKAS in April of 2006 to add Salt Spray, additional Mechanical Shock Test facilities and a 'Walk In' Temperature Chamber to our capabilities.

In October of 2007 as the result of our planned capability improvements and continuous improvement philosophy Alphatech moved into larger premises specifically designed for our Test House to meet the increasing requirements of our customers.

In April of 2010 a further extension to our scope of Accreditation was granted by UKAS to add Vibration with Temperature, Altitude, Free Fall, Drop & Topple and Ingress Protection (IP) Tests.
Alphatech were also UKAS Accredited for the DIN 40 050 Part 9 IPX9 Test Standard

Copies of our ISO 9001:2008 Accreditation and UKAS Accreditation certificates are attached for your information.
Alphatech's UKAS Schedule of Accreditation can be found at the UKAS website; www.ukas.org.

Objectives:

The primary objective of Alphatech's Environmental Test and Reliability Department is to assist its Customers in improving the quality and reliability of new and existing products.
This is achieved through close co-operation with the Customer, including review of the product specification and design, assessment of environmental and system operating conditions, product design validation testing and product/process validation testing of the Customers production line or outsourced manufacturing facility.

Responsibilities:

Alphatech's Environmental Test Facility can support its Customer's development engineering community. The facility can evaluate product design by participating in design reviews, and conduct environmental, mechanical and electrical tests. The performance of a product is thoroughly evaluated during Design Validation (DV) testing.

There are several approaches that can be taken for the DV test sequence.
Alphatech has the capability to perform Highly Accelerated Life Testing "HALT" to evaluate the product during the early development stages of the design.
We can develop specific sequences of Environmental tests such as temperature and/or Humidity cycling, Mechanical tests such as Vibration and Electrical tests such as input and output short circuit protection, polarity reversal and load dump.
The specific conditions for each test will depend on the product and Customer requirements.

Following the product Design Validation stage further support can be given to the customer by carrying out Process Validation testing with product manufactured on the Customers own manufacturing line or its outsourced manufacturing facility.
This can be carried out by a sequence of tests as stated before or by the use of Highly Accelerated Stress Screening "HASS" techniques. This verifies the Customer's equipment is capable of manufacturing the product without introducing manufacturing defects that would otherwise escape into the field.

Contact Information:

For further information and guidance, please contact:

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Section A: Climatic

Facilities available now **Planned but not currently available**

TEST CAPABILITY	STATUS	APPLICABLE TEST STANDARDS	UKAS ACCREDITED
COLD LOW TEMPERATURE TEST Min temp: -100ºC		BS 2011: A: 1990 IEC 60068-2-1: 1993 BS EN 60068-2-1:2007 BS EN 60068-2-1:1993 Tests Aa, Ab, Ad IEC 68-2-1: 1990 ETSI 300 019-2-1:2000 ETSI 300 019-2-2:1999 ETSI 300 019-2-3:2003 ETSI 300 019-2-4:2003 ETSI 300 019-2-5:2002 ETSI 300 019-2-6:2002 ETSI 300 019-2-7:2003 ETSI 300 019-2-8:1999 RTCA/DO-160D: Section 4.5 MIL STD 810E: 1989: Method 502.3 MIL STD 810F: 2000: Method 502.4 DEF STAN 07-55: 1975: Tests B4, B5 DEF STAN 00-35: 1999: Test CL4 DEF STAN 00-35: 1999: Test CL5	**YES** Temperature Range to - 70ºC
DRY HEAT HIGH TEMPERATURE TEST Max temp: +200ºC		BS 2011: B: 1977 (1980) BS EN 60068-2-2:2007 BS EN 60068-2-2: 1993 Tests Ba, Bb, Bd IEC 68-2-2: 1974 (1976) ETSI 300 019-2-1:2000 ETSI 300 019-2-2:1999 ETSI 300 019-2-3:2003 ETSI 300 019-2-4:2003 ETSI 300 019-2-5:2002 ETSI 300 019-2-6:2002 ETSI 300 019-2-7:2003 ETSI 300 019-2-8:1999 RTCA/DO-160D: Section 4.5 MIL STD 202F: 1980: Method 108A MIL STD 202G: 2002: Method 108A MIL STD 810E: 1989: Method 501.3 MIL STD 810F: 2000: Method 501.4 MIL STD 1344A: 1977: Method 1005.1 DEF STAN 07-55: 1975: Tests B1, B2 DEF STAN 00-35: 1999: Test CL1	**YES** Temperature Range to +150ºC
CHANGE OF TEMPERATURE (AIR) Single Chamber Min temp: -100ºC Max temp: +200ºC Max rate of change: 60ºC/min Two Chamber (Thermal Shock) Auto transfer between Chambers Min temp: -70ºC Max temp: +220ºC		BS 2011: Part 2.1: 1985 (1987): Tests Na, Nb IEC 60068-2-14: 1984 BS EN 60068-2-14: 2000: Tests Na, Nb ETSI 300 019-2-1:2000 ETSI 300 019-2-2:1999 ETSI 300 019-2-3:2003 ETSI 300 019-2-4:2003 ETSI 300 019-2-5:2002 ETSI 300 019-2-6:2002 ETSI 300 019-2-7:2003 ETSI 300 019-2-8:1999 RTCA/DO-160D: Section 5 UN Reg: ST/SG/AC.10/11/Rev.4: Test T2 UN Reg: ST/SG/AC.10/11/Rev.5: Test T2	**YES** Two Chamber (Thermal Shock) Auto Transfer between Chambers Temperature Range +150ºC to - 70ºC Gradual – Single Chamber Max rate of change: 20ºC/min

This table acts as a guideline only and customers should contact Alphatech to discuss their exact requirements

Section A: Climatic continued

Facilities available now **Planned but not currently available**

TEST CAPABILITY	STATUS	APPLICABLE TEST STANDARDS	UKAS ACCREDITED
CHANGE OF TEMPERATURE (AIR) (continued)		MIL STD 202F: 1980: Method 107E MIL STD 202G: 2002: Method 107G MIL STD 750D: 1995: Method 1051.5, 1056.7 MIL STD 810E: 1989: Method 503.3 MIL STD 810F: 2000: Method 503.4 DEF STAN 07-55: 1975: Tests B14: Procedure A DEF STAN 00-35: 1999: Test CL14	**YES** Temperature Range +150ºC to - 70ºC Max rate of change: 20ºC/min
HUMIDITY DAMP HEAT, STEADY STATE Temperature Range: -70ºC to + 180ºC Humidity Range 10% to 98% RH		BS 2011: 1977(1987): Test Ca BS 2011: 1990: Test Cb IEC 68-2-56: 1988 IEC 60068-2-78:2001 BS EN 60068-2-78: 2002: Tests Cab ETSI 300 019-2-1:2000 ETSI 300 019-2-2:1999 ETSI 300 019-2-3:2003 ETSI 300 019-2-4:2003 ETSI 300 019-2-5:2002 ETSI 300 019-2-6:2002 ETSI 300 019-2-7:2003 ETSI 300 019-2-8:1999 RTCA/DO-160D: Section 6 MIL STD 202G: 2002: Method 103, 106 MIL STD 810F: 2000: Method 507.4 DEF STAN 07-55: 1975: Tests B6, B7, B8 DEF STAN 00-35: 1999: Test CL7	**YES** Humidity/temp Ranges 50% to 95%RH 20ºC to 85 ºC Max chamber size (0.85x0.83x0.85) metres Humidity/temp Ranges 50% to 95%rh 20ºC to 60 ºC Max chamber size (1.2x1.1x2.4) metres
HUMIDITY DAMP HEAT, CYCLIC Temperature range: -70ºC to +180ºC Humidity range: 10% to 98% RH		BS 2011: 1981 (1987): Test Db BS 2011: 1977: Test Z/AD IEC 60068-2-3: 1969 IEC 60068-2-30: 1980 IEC 60068-2-38: 1974 BS EN 60068-2-30: 1999: Tests Db BS EN 60068-2-30: 2005: Tests Db BS EN 60068-2-38: 1999: Tests Z/AD ETSI 300 019-2-1:2000 ETSI 300 019-2-2:1999 ETSI 300 019-2-3:2003 ETSI 300 019-2-4:2003 ETSI 300 019-2-5:2002 ETSI 300 019-2-6:2002 ETSI 300 019-2-7:2003 ETSI 300 019-2-8:1999 RTCA/DO-160D: Section 6	**YES** Humidity/temp Ranges 50% to 95%RH 20ºC to 85 ºC Max chamber size (0.85x0.83x0.85) metres Humidity/temp Ranges 50% to 95%rh 20ºC to 60 ºC Max chamber size (1.2x1.1x2.4) metres
LOW AIR PRESSURE ALTITUDE (Up to 70,000ft)		BS 2011: 1984: Test M IEC60068-2-13: 1983 BS EN 60068-2-13: 1999: Test M RTCA/DO-160D: Section 4.6.1 MIL STD 810F: 2000: Method 500.4	**YES** Min 4.49 kPa (equiv 70,000 ft). Max chamber size 300mm diax500mm deep.

This table acts as a guideline only and customers should contact Alphatech to discuss their exact requirements

Section B: Dynamic

Facilities available now

Planned but not currently available

TEST CAPABILITY	STATUS	APPLICABLE TEST STANDARDS	UKAS ACCREDITED
VIBRATION Sinusoidal (Ambient temperature) Frequency range: 5 Hz to 2500 Hz Peak thrust: 26.7 kN (6000lbf) Max displacement : ±25.5 mm		BS 2011: 1983 (1986): Test Fc BS 2011: 1973 (1984): Test Fd IEC 68-2-6: 1995 IEC 60068-2-50: 1983 IEC 60068-2-51: 1983 BS EN 60068-2-6:1996 BS EN 60068-2-6: 2008 BS EN 60068-2-50:2000: Test Z/AFc BS EN 60068-2-51:2000: Test Z/BFc ETSI 300 019-2-1:2000 ETSI 300 019-2-2:1999 ETSI 300 019-2-3:2003 ETSI 300 019-2-4:2003 ETSI 300 019-2-5:2002 ETSI 300 019-2-6:2002 ETSI 300 019-2-7:2003 ETSI 300 019-2-8:1999 RTCA/DO-160D: Section 8 UN Reg: ST/SG/AC.10/11/Rev.4: Test T3 UN Reg: ST/SG/AC.10/11/Rev.5: Test T3 MIL STD 202F: 1980: Method 201A, 204D MIL STD 202G: 2002: Method 201A, 204D MIL STD 750D: 1995: Method 2046.2, 2051.1, 2056.1, 2057.2 MIL STD 750E:2006: Methods 2046.2, 2051.1, 2056, 2057.2 MIL STD 810E: 1989: Method 514.4 MIL STD 810F: 2000: Method 514.5 MIL STD 883F: 2004: Method 2005.2, 2006.1, 2007.3 MIL STD 1344A: 1977: Method 2005.1 DEF STAN 00-35: 1999: Test M1	**YES** Freq range: 5-2000HZ Peak thrust: 26.7 kN Max displacement : ±25.5 mm Temp range: Ambient Axes: Vertical only
COMBINED VIBRATION with TEMPERATURE Sinusoidal Freq range: 1 Hz to 3000 Hz Peak thrust: 8.9 kN (2000lbf) Max displacement : ±25.5 mm			**YES** Freq range: 5 Hz to 2000 Hz Peak thrust: 8.9 kN (2000lbf) Max displacement : ±25.5 mm Temp range: -40°C to +100°C Max ramp rate 10°C/min Chamber size 0.75m x 1.65m x 0.65m
VIBRATION Random (Ambient temperature) Freq range: 5 Hz to 2500 Hz RMS thrust: 22.2 kN (5000lbf) Max displacement : ±25.5 mm		BS 2011: 1973 (1984): Test Fd, Fda, Fdb, Fdc IEC 68-2-34: 1973 IEC 68-2-37: 1973 BS EN 60068-2-34: 1993 BS EN 60068-2-64: 1995 BS EN 60068-2-64: 2008 BS EN 61373:1999 ETSI 300 019-2-1:2000 ETSI 300 019-2-2:1999 ETSI 300 019-2-3:2003 ETSI 300 019-2-4:2003 ETSI 300 019-2-5:2002 ETSI 300 019-2-6:2002 ETSI 300 019-2-7:2003 ETSI 300 019-2-8:1999 RTCA/DO-160D: Section 8 MIL STD 202F: 1980: Method 214A MIL STD 202G: 2002: Method 214A MIL STD 810E: 1989: Method 514.4 MIL STD 810F: 2000: Method 514.5 MIL STD 883E: 1996: Method 2026 DEF STAN 07-55: 1975: Test A2 DEF STAN 00-35: 1999: Test M1	**YES** Freq range: 5-2000HZ RMS thrust: 22.24 KN Max displacement : ±25.5 mm Temp range: Ambient Axes: Vertical only
COMBINED VIBRATION with TEMPERATURE Random Freq range: 1 Hz to 3000 Hz RMS thrust: 8.9 kN (2000lbf) Max displacement : ±25.5 mm			**YES** Freq range: 5 Hz to 2000 Hz Peak thrust: 8.9 kN (2000lbf) Max displacement : ±25.5 mm Temp range: -40°C to +100°C Max ramp rate 10°C/min Chamber size 0.75m x 1.65m x 0.65m

This table acts as a guideline only and customers should contact Alphatech to discuss their exact requirements

Section B: Dynamic continued

Facilities available now Planned but not currently available

TEST CAPABILITY	STATUS	APPLICABLE TEST STANDARDS	UKAS ACCREDITED
SHOCK (Half Sine, Trapezoidal) Severity: 1g to 80g Duration: 0.2ms to 100ms (Severity & Mass dependant) Max Mass: 500Kg Temperature: Ambient (Terminal Peak Sawtooth) Severity: 1g to 75g Duration: 1ms to 100ms (Severity & Mass dependant) Max Mass: 500Kg Temperature: Ambient		BS 2011: 1988: Test Ea IEC 68-2-27: 1987 BS EN 60068-2-27: 1993: Test Ga ETSI 300 019-2-1:2000 ETSI 300 019-2-3:2003 ETSI 300 019-2-4:2003 ETSI 300 019-2-5:2002 ETSI 300 019-2-6:2002 ETSI 300 019-2-7:2003 ETSI 300 019-2-8:1999 RTCA/DO-160D: Section 7	**YES**
(Half Sine) Max Severity: 710g Max Duration: 16ms (Severity & Mass dependant) Max Mass: 500Kg Temperature: Ambient		UN Reg: ST/SG/AC.10/11/Rev.4: Test T4 UN Reg: ST/SG/AC.10/11/Rev.4: Test T5 MIL STD 202F:1980: Method 213B MIL STD 202G:2002: Method 213B MIL STD 750D:1995: Method 2016.2 MIL STD 750E:2006:Method 2016.2 MIL STD 810E:1989: Method 516.4 MIL STD 810F:2000: Method 516.5 MIL STD 883E:1996: Method 2002.4 MIL STD 883F:2004: Method 2002.4 MIL STD 1344A: 1977: Method 2004.1 DEF STAN 07-55: 1975: Test A3 DEF STAN 00-35: 1999: Test M1	**YES** MTS System Half Sine Max severity 200g Max duration 16ms (severity dependant) Max mass: 500kg
Half Sine, Sawtooth Trapezoidal Max severity: 50kg Max mass: 500kg Temp range: -40°C to +100°C Chamber size 0.75m x 0.65m x 0.65m			**YES** Combined Chamber
BUMP (Half Sine) Severity: 1g to 75g Duration: 1ms to 50ms (Severity & Mass dependant) Max Mass: 500Kg Temperature: Ambient		BS 2011: 1973 (1984): Test Eb IEC 68-2-29: 1987 BS EN 60068-2-29: 1993: Test Eb- ETSI 300 019-2-1:2000 ETSI 300 019-2-2:1999 ETSI 300 019-2-3:2003 ETSI 300 019-2-4:2003 ETSI 300 019-2-5:2002 ETSI 300 019-2-6:2002 ETSI 300 019-2-7:2003 ETSI 300 019-2-8:1999 DEF STAN 07-55: 1975: Test A5 DEF STAN 00-35: 1999: Test M12	**YES** Vibrator Induced Vertical Axis only
Max severity: 50kg Max mass: 500kg Temp range: -40°C to +100°C Chamber size 0.75m x 0.65m x 0.65m			**YES** Combined Vibration Chamber

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Section B: Dynamic continued

Facilities available now Planned but not currently available

TEST CAPABILITY	STATUS	APPLICABLE TEST STANDARDS	UKAS ACCREDITED
FREE FALL (Drop Test)		BS EN 60068-2-31:2008 BS EN 60068-2-32:1993 BS 2011: Ed:1992:Procedure 1 IEC 68-2-32:1975 DEF STAN 00-35:Pt3;Iss 4:Test M5 DEF STAN 07-55:1975:Test A9	**YES** Max item mass: 45kg Maximum item size: 0.5m x 0.5m x 0.5m Max drop height: 1m
ROUGH HANDLING SHOCK Drop and Topple		BS EN 60068-2-31:2008 BS EN 60068-2-32:1993 BS 2011: Ec:1977 IEC 68-2-31:1969 DEF STAN 00-35:Pt3;Iss 4:Test M4 DEF STAN 07-55:1975:Test A4	**YES** Max item mass: 45kg Maximum item size: 1m x 1m x 1m

Section C: Specialised Tests

Facilities available now Planned but not currently available

TEST CAPABILITY	STATUS	APPLICABLE TEST STANDARDS	UKAS ACCREDITED
HIGHLY ACCELERATED LIFE TEST (HALT) Temperature Range: -100ºC to +200ºC Max Ramp Rate: 60ºC/min Max Vibration: 60Grms 6 DOF		General Motors – GMW 8287 Highly Accelerated Life Testing – QualMark HALT Guideline Design Validation tool for reducing test times from months to days	**NO**
HIGHLY ACCELERATED STRESS SCREEN (HASS) Temperature Range: -100ºC to +200ºC Max Ramp Rate: 60ºC/min Max Vibration: 60Grms 6 DOF		General Motors – GMW 8287 Highly Accelerated Life Testing – QualMark HALT Guideline Design Validation tool for reducing test times from months to days	**NO**
DEWING TEST		BMW 601 22.0: Part 4	**NO**
RESISTANCE TO SOLVENTS/ CONTAMINATING FLUIDS		IEC 68-2-45: 1980 BS EN 60068-2-45: 1993 MIL STD 202F: 1980: Method 215J MIL STD 202G: 2002: Method 215K MIL STD 750D: 1995: Method 1022.5 MIL STD 883E: 1996: Method 2015.12	**NO**
SALT SPRAY (MIST)		BS 2011: 1982: Test Ka IEC 68-2-11: 1981 BS EN 60068-2-11: 1999: Test Ka ASTM B117-03 RTCA/DO-160D: Section 14 MIL STD 202F: 1980: Method 101D MIL STD 202G: 2002: Method 1001E MIL STD 750D: 1995: Method 1041.3 MIL STD 810E: 1989: Method 509.3 MIL STD 810F: 2000: Method 509.4 MIL STD 1344A: 1977: Method 1001.1	**YES**
SALT CORROSION		BS 2011: 1987: Test Kb IEC 68-2-52: 1996 BS EN 60068-2-52: 1996: Test Kb MIL STD 750D: 1995: Method 1046.2 MIL STD 883E: 1996: Method 1009.8	**YES**
IMMERSION		BS 2011: 1990: Test Rc IEC 68-2-18: 2000 BS EN 60068-2-18: 2001: Test R	**NO**
SEALING		BS 2011: 1981 (1990): Test Qc IEC 60068-2-17: 1994 BS EN 60068-2-17: 1994: Test Q	**NO**
IMPACT		UL1703:2003:Section 30	**NO**

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Section C: Specialised Tests continued Facilities available now Planned but not currently available

TEST CAPABILITY	STATUS	APPLICABLE TEST STANDARDS	UKAS ACCREDITED
IMPACT		UN Reg: ST/SG/AC.10/11/Rev.4: Test T6 UN Reg: ST/SG/AC.10/11/Rev.5: Test T6	**NO**
EXTERNAL SHORT CIRCUIT		UN Reg: ST/SG/AC.10/11/Rev.4: Test T5 UN Reg: ST/SG/AC.10/11/Rev.5: Test T5	**NO**
OVERCHARGE		UN Reg: ST/SG/AC.10/11/Rev.4: Test T7 UN Reg: ST/SG/AC.10/11/Rev.5: Test T7	**NO**

Section C: Specialised Tests continued Facilities available now Planned but not currently available

TEST CAPABILITY	STATUS	APPLICABLE TEST STANDARDS	UKAS ACCREDITED
INGRESS PROTECTION TESTS			
IP1X Protected against solid objects greater than 50 mm diameter		IEC 60529: 1989 EN 60529: 1991 BS EN 60529: 1992 (2000) DIN 40050: Part 9	**YES**
IP2X Protected against solid objects greater than 12.5 mm diameter			
IP3X Protected against solid objects greater than 2.5 mm diameter			
IP4X Protected against solid objects greater than 1 mm diameter			
IP5X Dust protected		IEC 60529: 1989 IEC 60068-2-68: 1996 BS EN 60068-2-68: 1996: Test L DIN 40050: Part 9	**YES**
IP6X Dust tight			
IPX1 Protected against dripping water		IEC 60529: 1989 EN 60529: 1991 BS EN 60529: 1992 (2000) DIN 40050: Part 9	**YES**
IPX2 Protected against dripping water when tilted up to 15º			
IPX3 Protected against spraying water			
IPX4 Protected against splashing water			
IPX5 Protected against water jets			
IPX6 Protected against powerful water jets			
IPX7 Protected against the effects of immersion			
IPX8 Protected against submersion			
IPX9K High pressure / high temperature		DIN 40050: Part 9	**YES**

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Section D: ISO 9001:2008 Certificate

Certificate GB03/58524

The management system of

ALPHATECH Ltd

Green House, Homefield Industrial Estate,
Haverhill, Suffolk, CB9 8QP, UK

has been assessed and certified as meeting the requirements of

ISO 9001:2008

For the following activities

The sales, hire and service of environmental test chambers and associated products, and provision of environmental test services.

Further clarifications regarding the scope of this certificate and the applicability of ISO 9001:2008 requirements may be obtained by consulting the organisation

This certificate is valid from 21 February 2012 until 21 February 2015 and remains valid subject to satisfactory surveillance audits
Re certification audit due before 21 February 2015
Issue 6. Certified since 21 February 2003

Authorised by

SGS United Kingdom Ltd, Systems & Services Certification
Rossmore Business Park, Ellesmere Port, Cheshire CH65 3EN, UK
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SGS 9001-SC1 0911

Page 1 of 1

UKAS MANAGEMENT SYSTEMS
005

Section E: ISO/IEC 17025:2005 Certificate

United Kingdom Accreditation Service

ACCREDITATION CERTIFICATE

UKAS
UNITED KINGDOM ACCREDITATION SERVICE

TESTING LABORATORY
No. 2645

Alphatech Limited

is accredited in accordance with the recognised International Standard ISO/IEC 17025:2005
General Requirements for the competence of testing and calibration laboratories.

This accreditation demonstrates technical competence for a defined scope as detailed in and at the locations specified in the schedule to this certificate, and the operation of a laboratory quality management system (refer joint ISO-ILAC-IAF Communiqué dated 18 June 2005).

The schedule to this certificate is an essential accreditation document and from time to time may be revised and reissued by the United Kingdom Accreditation Service. The most recent issue of the schedule of accreditation, which bears the same accreditation number as this certificate, is available from the UKAS website www.ukas.org.

This accreditation is subject to continuing conformity with United Kingdom Accreditation Service requirements. The absence of a schedule on the UKAS website indicates that the accreditation is no longer in force.

Accreditation Manager, United Kingdom Accreditation Service

Initial Accreditation date
01 July 2004

This certificate issued on
13 April 2006

The Department of Trade and Industry (DTI) has entered into a memorandum of understanding with the United Kingdom Accreditation Service (UKAS) through which UKAS is recognised as the national body responsible for assessing and accrediting the competence of organisations in the fields of calibration, testing, inspection and certification of systems, products and persons