

# Schedule of Accreditation

issued by

## United Kingdom Accreditation Service

21 - 47 High Street, Feltham, Middlesex, TW13 4UN, UK

 <p>Accredited to ISO/IEC 17025:2005</p>	<h3>Nottingham Transportation Engineering Centre</h3> <p>Issue No: 008 Issue date: 25 May 2011</p>	
	<p><b>Pavement Research Building</b> University of Nottingham University Park Nottingham NG7 2RD</p>	<p><b>Contact: Mr J Watson</b> Tel: +44 (0) 115 846 8453 Fax: +44 (0) 115 846 8445 E-Mail: <a href="mailto:jon.watson@nottingham.ac.uk">jon.watson@nottingham.ac.uk</a> Website: <a href="http://www.nottingham.ac.uk/ntec">www.nottingham.ac.uk/ntec</a></p>
<p><b>Testing performed at the above address only</b></p>		

### DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
BITUMINOUS MATERIALS	Needle penetration - 25°C	BS EN 1426:2007 EN 1426:2007 BS 2000-49:2007 IP 49-2007 ASTM D 5-05a
	Softening point - ring and ball method - 30°C to 150°C	BS EN 1427:2007 EN 1427:2007 BS 2000-58:2007 IP 58-2007 ASTM D 36-95 (2000)e1
	Solubility	BS EN 12592:2007 EN 12592:2007 BS 2000-47:2007 IP 47-2007 ASTM D 2042-01
	Fraass breaking point	BS EN 12593:2007 EN 12593:2007 BS 2000-80:2007 IP 80-2007
	Kinematic viscosity	BS EN 12595:2007 EN 12595:2007 BS 2000-319:2007 IP 319-2007 ASTM D 2170-01a



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BITUMINOUS MATERIALS	Resistance to hardening under the influence of heat and air - RTFOT method	BS EN 12607-1:2007 EN 12607-1:2007 BS 2000-460.1:2007 IP 460.1-2007 ASTM D 2872-04 AASHTO T 240-03
	Bitumen recovery: fractionating column	BS EN 12697-4:2005 EN 12697-4:2005
	Viscosity using a rotating spindle apparatus	BS EN 13302:2003 EN 13302:2003 BS 2000-505:2003 IP 505-2004 ASTM D 4402-02 AASHTO T 316-04
	Storage stability of modified bitumen	BS EN 13399:2010 EN 13399:2010 BS 2000-517:2010 IP 517-2010
	Flexural creep stiffness of asphalt binder using the bending beam rheometer (BBR)	BS EN 14771:2005 EN 14771:2005 BS 2000-533:2005 IP 533-2005 AASHTO T 313-05
	Flash and fire points - Cleveland open cup method	BS EN ISO 2592:2001 EN ISO 2592:2001 ISO 2592:2000 BS 2000-36:2002 IP 36-2002 ASTM D 92-05a AASHTO T 48-04
	Accelerated long-term ageing - pressure ageing vessel (PAV)	BS EN 14769:2005 EN 14769:2005 IP 535-2005 AASHTO R 28-02 HAPAS SG4 Draft 1.0 : October 1997



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BITUMINOUS MATERIALS  BITUMINOUS MIXTURES for roads and other paved areas	Complex shear modulus and phase angle - dynamic shear rheometer (DSR) method	BS EN 14770:2005 EN 14770:2005 IP 536-2005 IP PM CM/02 AASHTO T 315-05 Specification for Highway Works, Clause 956:August 2008
	Fracture properties of asphalt binder in direct tension (DT)	AASHTO T 314-02
	Wheel-tracking rate and depth	BS 598-110:1998 BBA Guidelines Document for the Assessment and Certification of Thin Surfacing Systems for Highways:May 2008
	Maximum density - volumetric procedure	BS EN 12697-5:2009 EN 12697-5:2009
	Bulk density - dry - saturated surface dry (SSD) - sealed specimen - by dimensions	BS EN 12697-6:2003 EN 12697-6:2003
	Air voids content	BS EN 12697-8:2003 EN 12697-8:2003
	Binder drainage - Schellenberg method	BS EN 12697-18:2004 EN 12697-18:2004
	Wheel tracking using a small size device and procedure A	BS EN 12697-22:2003 EN 12697-22:2003
	Wheel tracking using a small size device and procedure B in air	BS EN 12697-22:2003 EN 12697-22:2003
	Stiffness - test applying indirect tension to cylindrical specimens (IT-CY)	BS EN 12697-26:2004 EN 12697-26:2004



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BITUMINOUS MIXTURES for roads and other paved areas	Specimen prepared by roller compactor  Laboratory mixing  Indirect tensile stiffness modulus <i>(loads from 0 to 10 kN)</i>  Fatigue characteristics using indirect tensile fatigue <i>(loads from 0 to 10 kN)</i>  Sensitivity to water <i>(loads from 0 to 10 kN)</i>  Accelerated ageing and ageing characteristics <i>(loads from 0 to 10 kN)</i>	BS EN 12697-33:2003 EN 12697-33:2003 BBA Guidelines Document for the Assessment and Certification of Thin Surfacing Systems for Highways:May 2008  BS EN 12697-35:2004 EN 12697-35:2004  BS DD 213:1993  BS DD ABF:August 2003  BBA Guidelines Document for the Assessment and Certification of Thin Surfacing Systems for Highways:May 2008  BBA Guidelines Document for the Assessment and Certification of Thin Surfacing Systems for Highways:May 2008
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