

Annex to the Accreditation Certificate No.LA.01.063, issued on 23-02-2023, approved on 23-02-2023 by the Order No. AK-40 of the Director of the Lithuanian National Accreditation Bureau 1 (6)

Accredited to LST EN ISO/IEC 17025:2018

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SCOPE OF ACCREDITATION Flexible*

Materials or products tested	Component, parameter or characteristic to be tested	Reference number of the document specifying test methods, clause (if relevant)	Techniques, methods and/or equipment used (where appropriate)
Bituminous mixtures	Sampling	LST EN 12697-27	from a lorry load of material; from a mixer transporter; around the augers of the paver; in heaps; from the laid but not rolled material using sampling trays; from the load but not rolled material from a cut trench; of laid and compacted materials by coring; from the slat conveyor of a continuous process plant; from material hopper/paver
	Preparation of samples for determining binder content, water content and grading	LST EN 12697-28	Inspection, preparatory and heat treatment, sample reduction by quartering
	Specimen preparation by impact compactor	LST EN 12697-30	Impact compactor method
	Soluble binder content	LST EN 12697-1, 5.5.2 p.	Differential method
	Dimensions of a bituminous specimen	LST EN 12697-29	Measurement of rectangular/non- rectangular cylindrical specimens with caliper gauge
	The maximum density	LST EN 12697-5, 9.2 p.	Volumetric method

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	Bituminous specimens void characteristics	LST EN 12697-8	Calculation method
	Particle size distribution	LST EN 12697-2+A1	Sieving method
	Temperature measurement	LST EN 12697-13	Measurement with thermometer
	Thickness of a bituminous pavement	LST EN 12697-36 6.1 p.*	Core layer thickness measurement with caliper
	Bulk density of bituminous specimens	LST EN 12697-6	Method for dry sample; saturated surface dry (SSD); for a paraffin- sealed sample; method by dimensions
	Laboratory mixing	LST EN 12697-35, except annex A	Mixing using laboratory mixer
	Indirect tensile strength of bituminous specimens	LST EN 12697-23	Indirect tensile method
	Water sensitivity of bituminous specimens	LST EN 12697-12, A method	Indirect tensile method
	Specimen prepared by roller compactor	LST EN 12697-33, 5.3 p.	Roller compactor method
	Wheel tracking	LST EN 12697-22, 6.3 p.; 7.1 p.; 7.3.2 p.; 7.5.1 p.; 7.5.2.1 p.; 7.6 p.; 8.3.1 p.; 8.3.2 p.; 8.3.3 p.; 8.3.5 p.; B model; 9.3.2 p.	Running the compacted plate on a wheel roller, small size device, procedure B in air
	Affinity between aggregate and bitumen by rolling bottle method	LST EN 12697-11, 5 ch.	Rolling bottle method
	Asphalt layer shear test	TP Asphalt – StB, teil 80	Direct shear test
	Asphalt layer adhesive tensile strength test	TP Asphalt – StB, teil 81	Compressive strength test
	Penetration	LST EN 1426	Penetration needle method
	Softening point	LST EN 1427	Ring and ball method
Bitumen and bituminous binders	Preparation of test samples	LST EN 12594, 7.1 p. and 7.2 p.	Solid or semi-solid samples; preparation of samples of soft binders for testing
	Characterization of perceptible properties	LST EN 1425	Method for determining the visual properties of binders

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Materials or products tested	Component, parameter or characteristic to be tested	Reference number of the document specifying test methods, clause (if relevant)	Techniques, methods and/or equipment used (where appropriate)
	Particle size distribution	LST 1360-1 *	Sieving method
	Density	LST 1360-6, 7.2 p. and 7.3 p.	Ring method; sand replacement method
	Sampling	LST 1360-9*	From a small cone- shaped pile; from embankments and large piles; from transportation facilities; from conveyors, chutes and silo tower openings; from railway wagons, ships and trucks; mixing, splitting and reducing samples
	Bearing capacity	LST 1360-5	Determination the deformation modulus by static loading 300 mm plate test
	Dynamic deformation modulus	Instruction for test by dynamic device	Loading test by dynamic device
Soils	Water permeability	LST EN ISO 17892-11, except 7.1 p.	Under constant pressure
	Determination of liquid and plastic limit	LST 1360.4	Soil fluidity by Casagrande device and soil thread rolling methods
	Proctor test	LST 1360-2, except 7.2.5 p.*	Proctor test
	Determination density of solid particles	LST 1360.7, except 4 p.	Capillary pycnometer method
	Determination of water content	LST EN ISO 17892-1, except annexes A, B and C	Drying in a ventilated oven
	Uniaxial compressive strength	BN GSR 12, VII ch.	Loading to failure
	Resistance to freezing	BN GSR 12, VIII ch.	Soaking; exposure to frost; determination of height change
	Uniaxial compressive strength	BN GPR 12, VII ch. except V section	Loading to failure
Aggregates	Sampling	LST EN 932-1, 8.8 p. and 9 p.	Sampling from stockpiles; reduction – using a riffle box,

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			quartering, fractional shovelling
	Laboratory samples reducing	LST EN 932-2	Rotary sample divider; riffle box; fractional shovells; quartering; crushing to reduce the particle size; obtaining duplicate samples
	Sampling from road structure	LST 1971	Manual mode
	Particle size distribution	LST EN 933-1	Washing, sieving and weighing method
	Particle shape. Flakiness index	LST EN 933-3	Sieving on analytical and bar sieves
	Particle shape. Shape index	LST EN 933-4	Measurement by particle slide gauge
	Percentage of crushed and broken surfaces in coarse aggregate particles	LST EN 933-5	Weighing method
	Resistance to wear by micro-Deval method	LST EN 1097-1	Micro-Deval method
	Resistance to fragmentation by Los Angeles test method	LST EN 1097-2, 5 p. and annex A	The Los Angeles method
	Bulk density and voids content	LST EN 1097-3, except annex A	Weighing method; calculation method
	Water content by drying in a ventilated oven	LST EN 1097-5	Drying in a ventilated oven
	Particle density and water absorption	LST EN 1097-6, except annexes D, E, F and H*	Pycnometer and wire basket method
	Resistance to atmospheric affects by magnesium sulfate method	LST EN 1367-2	Magnesium sulfate method
	Resistance to freezing and thawing	LST EN 1367-1	Soaking; exposure to frost; determination of the strenght loss
	Aggregates for railway ballast particle length	LST EN 13450, 6.7 p.	Measuring with a caliper gauge
	Resistance to freezing and thawing of railway ballast	LST EN 13450, annex F	Soaking; exposure to frost; determination of the strenght loss

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	Resistance of railway ballast to magnesium sulfate test	LST EN 13450, annex G	Magnesium sulfate method
Unbound and hydraulically bound mixtures	Control density and water content by Proctor compaction	LST EN 13286-2	Proctor test
	California bearing ratio, immediate bearing index and linear swelling	LST EN 13286-47*	California bearing ratio, immediate index, vertical swelling method
	Compressive strength of hydraulically bound mixtures	LST EN 13286-41	Compressive strength test
Road and airfield surface	Slip/skid resistance of a surface by pendulum test	LST EN 13036-4	Pendulum test
	Irregularity of pavement courses by straightedge test	LST EN 13036-7	Straightedge method
	Macrotexture depth of pavement surface by volumetric patch technique	LST EN 13036-1	Volumetric patch method
Road and airfield pavement structure	Layer thickness measured by electromagnetic magnetic induction method	MN SSN 15, VII ch.	Electromagnetic magnetic induction method
	Layer thickness measured from drilled core	MN SSN 15, VIII ch.	Measuring a core with a caliper gauge
	Layer thickness, measured by depth- meter	MN SSN 15, X ch.	Measuring with a depth gauge
Road marking materials	Skid resistance by pendulum test	LST EN 1436, 4.5 p.	Pendulum test
	Road marking performance: luminance coefficient under diffuse illumination Q _d ; coefficient of retroreflected luminance R _L	LST EN 1436, annexes A and B	Measurement of daytime and night-time visibility using a retroreflectometer

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	Vertical road sign retroflection coefficient R _A	LST EN 12899-1; CIE 54.2, 5.5 p.	Measurement of retroflection using a retroreflectometer
Road element covering	Determination of dry film thickness	LST EN ISO 2808:2019, 5.5.6 p. and 5.5.7 p.	Magnetic-induction and eddy-current methods
	Determination of dry film thickness	LST EN ISO 2178, 4.3 p. LST EN ISO 1461, 6.2 p.	Magnetic-induction method
Concretes	Shape and dimensions of samples	LST EN 12390-1	Measuring with a caliper and ruler
	Compressive strength of test specimens	LST EN 12390-3, except annex A	Loading to failure in a compression machine (maximum load 2000 kN)

*Defined and applicable for the whole accreditation scope following degrees of flexibility: - application of the updated documents of test methods already covered by accreditation or replacing them.

Actual scope of accreditation is published on the website

 $\underline{https://vilniustech.lt/environmental-engineering/departments/road-research-institute/344769?lang=2\#346711}$

Deputy Director

Tadas Juodelis