

ACCREDITATION CERTIFICATE

No. LA.01.002

Lithuanian National Accreditation Bureau hereby certifies that

complies with the requirements of

UAB Laboratorinių bandymų centras

LST EN ISO/IEC 17025:2018

legal entity code: 135641038

and is competent to perform:

Testing and sampling of aggregates, mineral aggregates, bitumen, bituminous binders and emulsions, bituminous mixtures, hot asphalt and coatings, road marking materials, permanent vertical road signs, zinc coatings, mortars and mixes, natural stone, paved paving stones, concrete mixtures and articles, cement

The scope of accreditation below is an integral part of this certificate. Locations of the conformity assessment body are specified in the scope of accreditation

Initial accreditation date: **1995-07-03**

Certificate issued / valid since: **2024-06-14**

Version of: **2024-06-05**

Expiry date: **2029-06-13**

Director



DĀLIA BALEŽENTĒ

The certificate may be changed, its validity suspended or withdrawn by the decision of the National Accreditation Bureau. Information on the actual data of accreditation certificates may be verified at nab.lrv.lt



UAB Laboratorinių bandymų centras, accredited in accordance with **LST EN ISO/IEC 17025:2018**

Location of the conformity assessment body

R. Kalantos str. 85A, LT- 52310 Kaunas

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)
Aggregate (sand, crushed stone, mixtures, soil) and micro-aggregate	Sample taking	LST EN 932-1	From a stationary conveyor belt; as aggregate pours out of a pipe or off a belt; from a pneumatic tube; from packaging; from a hydraulic grab or bucket; from a dry bulk storage bunker; from piles; from freight rail cars, trucks, ships
	Sample taking	LST 1360-9	From deposits located above water; from deposits under water; from natural soils; from man-made landfill; from deposits of bound soils
	Sample taking	LST 1971	From road construction
	Laboratory sample distribution	LST EN 932-2	Sample reduction by sample divider, quartering, screening
	Fractional composition	LST 1360-1	Sieving method
	Fractional composition	LST EN 933-1	Wet sieving or dry sieving method
	Fine particle content	LST EN 933-9	Methylene blue method
	MB (MB _F) value	LST EN 933-9	Methylene blue method
	Water content	LST EN 1360-3	Drying on an electric cooker or on a gas cooker; drying in a microwave oven

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)
Aggregate (sand, crushed stone, mixtures, soil) and micro-aggregate	Water content	LST EN 1097-5	Drying in a ventilated oven
	Apparent (bulk) density and void volume of dry compacted filler	LST EN 1097-3	Drying in a ventilated oven
	Particle density and water holding capacity	LST EN 1097-6	Pycnometric method Wire basket method
	Coarse organic impurity content	LST 1361-12	Visually selecting and (or) using zinc chloride solution
	MS value	LST EN 1367-2	Magnesium sulphate method
	Particle shape	LST EN 933-3	Sieving method
	Shape index	LST EN 933-4	Measuring particle shapes with calipers
	Relative quantity of crushed particles	LST EN 933-5	Visual and weight measurement methods
	Shell content (SC)	LST EN 933-7	Selecting shells and shell fragments from coarse aggregate and determining the proportion of the mass
	Micro-Deval coefficient M_{DE} ; Micro-Deval coefficient $M_{DE, RB}$	LST EN 1097-1	Micro-Deval test method
	Los Angeles coefficient LA ; Los Angeles coefficient LA_{RB}	LST EN 1097-2	Los Angeles abrasion test method
	Impact test value SZ ; Impact test value SZ_{RB}	LST EN 1097-2	Impact test method
	Particle length	LST EN 13450	The content of track ballast crushed stone particles $\geq 100\text{mm}$ is determined
	Relative reduction in basalt mass; Basalt strength reduction	LST EN 1367-3	Mass and strength reduction after immersion in boiling water
	Soil density	LST 1360-6	Core cutter method
	Efflux index	LST EN 933-6	Measurement of the flow time for fine aggregates up to 2 mm
	Ratio of dry density and moisture content	LST EN 13286-2	Proctor compaction test method
	Water-soluble chloride content	LST EN 1744-1+A1 7 p.	Titrimetric (Volhard method)
	Water-soluble sulphate content	LST EN 1744-1+A1 10.1 p	Gravimetric method
	Acid-soluble sulphate content	LST EN 1744-1+A1 12 p.	Gravimetric method
Humus content	LST EN 1744-1+A1 15.1 p.	Visual inspection method	
Solubility in water	LST EN 1744-1+A1 16.1 p.	Gravimetric method	

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)
Aggregate (sand, crushed stone, mixtures, soil) and micro-aggregate	Water permeability test	LST EN ISO 17892-11	Determining the characteristics of water flow through soil using a cylindrical permeability meter under constant hydrostatic pressure
	Freeze-thaw resistance (mass loss)	LST EN 1367-1	Determination of mass loss after freeze-thaw cycle
	Void volume of dry compacted micro-aggregate (filler aggregate)	LST EN 1097-4	Determination of void volume of dry compacted micro-aggregate (filler aggregate) with a Rigden apparatus
	Micro-aggregate (filler aggregate) particle density	LST EN 1097-7	Pycnometric method
	Micro-aggregate stiffening effect ($\Delta_{R\&B}$)	LST EN 13179-1	Determination of the stiffness effect of mineral micro-aggregate (filler aggregate) used in bitumen mixtures by means of the Delta ring and ball test method
	Micro-aggregate fractional composition	LST EN 933-10	Airflow sieving
Activated mineral powder	Sample taking	LST 1419-1	From a dry bulk storage bunker, from a freight rail car, a vehicle, a batch of bags
	Fractional composition	LST 1419-2	Wet sieving method
	Bitumen penetration index PI	LST 1419-2	Determination of consistency with a Vicat apparatus
	Moisture	LST 1419-2	Drying in a drying oven to a stable mass at a temperature of (60±2)C
	Hydrophobicity (dewetting)	LST 1419-2	Moistening for 24 h
	Density	LST 1419-2	Pycnometric method
Road surface structure	Load-bearing capacity	LST 1360-5	Determination of the static deformation modulus with a 300 mm static load plate
	Load-bearing capacity	Instruction of test with dynamic device	Determination of the dynamic deformation modulus using a falling weight deflectometer
	Unevenness of the surface of the layers	LST EN 13036-7	Ruler method
	Layer thickness	Methodical instructions for determination of thickness of layers of road pavement construction MN SSN 15, c. X	Determination of the thickness of layers of unbound and hydraulically bound mixtures by measuring with a depth caliper (gauge)
Road marking materials, vertical road signs, films for traffic safety and other elements	Luminance coefficient, under diffuse illumination Q_d ; Coefficient of retroreflected luminance R_L	LST EN 1436	Measurement of visibility of road marking materials in daytime and at nighttime, with a retroreflectometer
	Thickness of coating of film (zinc, paint, varnish)	LST EN ISO 2808	Electromagnetic induction principle (method 7B.2)
	Vertical road sign retro reflectivity coefficient R_A	LST EN 12899-1; CIE 54.2	Measurement of reflectivity, with a retroreflectometer

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)
Bitumen, bituminous binders, emulsion	Sample taking	LST EN 58	Sample taking in stationary systems
	Sample preparation	LST EN 12594	Methods of preparation of bitumen and bituminous binders
	Characterisation of perceptible properties	LST EN 1425	Organoleptic method
	Resistance to hardening, under heat and air	LST EN 12607-1	RTFOT method
	Penetration	LST EN 1426	Needle penetration
	Softening temperature	LST EN 1427	Delta ring and ball test method
	Determination of ductility (tensility)	LST 1362-7	Stretching method
	Bitumen adhesion to mineral materials	LST 1362-23	Adhesion to a dry surface
	Elastic recovery of modified bitumen	LST EN 13398	Stretching of a specimen under constant force
	Efflux time of a bituminous emulsion	LST EN 12846-1	Determination using an efflux viscometer
	Residue on sieving of bituminous emulsions, and storage stability	LST EN 1429	Filtration through sieves of a specified size. Mass differentiation method
	Water content in bitumen emulsions	LST EN 1428	Azeotropic distillation
	Recovered binder and oil distillate from bitumen emulsions by distillation	LST EN 1431	Distillation
	Bitumen emulsions adhesive strength	LST EN 13614	Method of immersion in water
	Bituminous mixtures and surfaces	Flash point and ignition temperature	LST EN ISO 2592 (except p. 8)
Density and specific gravity		LST EN 15326+A1	Method of capillary pycnometer with cork
Recovery of binder from bituminous emulsion or cut-back or fluxed bituminous binders		LST EN 13074-1	Method of recovery by evaporation
Fraass breaking point		LST EN 12593	Fraass method
	Sample taking	LST EN 12697-27	From production equipment, vehicles, storage containers

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 and surfaces	Temperature measurement	LST EN 12697-13	Measurement with a thermometer
	Fractional composition	LST EN 12697-2+A1	Granulometry
	Specimen preparation by impact compactor	LST EN 12697-30	Impact compaction method using a steel anvil
	Specimen apparent (bulk) density	LST EN 12697-6	Dry specimen; saturated-surface-dry specimen (SSD); paraffin-isolated specimen; according to dimensions
	Index of void volume of specimens	LST EN 12697-8	Calculation method
	Dimensions of specimens	LST EN 12697-29	Measurement with calipers
	Preparation of samples for determining binder content, water content and grading	LST EN 12697-28	Inspection, preparation and heat treatment, sample reduction by quartering
	Stability and flowability	LST EN 12697-34	Marshall test
	Soluble binder content	LST EN 12697-1 5.4.2 p. (differential method), 5.5.2 p., B1.7.	Differential method
	Greatest density	LST EN 12697-5	Volumetric method
	Thickness of surface	LST EN 12697-36	Measurement with calipers
	Specimen preparation	LST EN 12697-33 5.2.1, 6, 7.2 p.	Roller compaction method
	Wheel tracking	LST EN 12697-22 6.3, 7.1, 7.2.2, 7.3, 7.4, 8.3 p.; Model B; 9.3.2 p.	Small device, B type (procedure in the air)
	Bitumen recovery by means of rotary evaporator	LST EN 12697-3+A1	Recovery by means of rotary evaporator
	Fracturing force of layers of specimens of bituminous mixtures	TP Asphalt StB, part 80	Compression method
	Water content	LST EN 12697-14	Extraction method
	Indirect tensile strength of bituminous specimens	LST EN 12697-23	Compression method
	Permeability of bituminous specimens	LST EN 12697-19	Determination of permeated water content under atmospheric pressure
	Water sensitivity of bituminous specimens	LST EN 12697-12	Comparative method for specimens stored dry and those immersed in water
	Affinity between aggregate and bitumen	LST EN 12697-11	The rolling bottle method

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)
	Skid resistance and friction of road surface	LST EN 13036-4	Pendulum method
Building mixtures, mortar	mortars, hardened	Sample taking and preparation	LST EN 1015-2 Sample taking from a mixer, from a conveyor, from a pipe and so on, from dry bulk storage bunkers, boxes, piles or bags, from dry bulk transport vehicles; Joint sample reduction to testing sample; Mortar from dry components and water or partially dosed mixture and binder preparation for testing in a mixer
	Flow	LST EN 1015-3	Flow method
	Density	LST EN 1015-10	Determination of specimen volume by means of water displacement
	Bend strength and compressive strength	LST EN 1015-11	Compression and bending of specimens to the point of collapse
	Resistance to freezing (change in compressive strength)	LST L 1413.11	Determination of the change in compressive strength after freeze-thaw cycles
Natural stone, setts (worked pavestones)	Resistance to freezing	LST EN 12371	Determination of compressive strength or bend strength and changes in appearance after freeze-thaw cycles
	Skid resistance	LST EN 14231	Determination of skid resistance by means of a pendulum testing device
	Water holding capacity	LST EN 13755	Determination of water holding capacity at atmospheric pressure
	Single-axis compressive strength	LST EN 1926	Compression of specimens to the point of collapse
	Bend strength	LST EN 12372	Bending of specimens with a centred load to the point of collapse
	Dimensions	LST EN 13373	Measurement of the geometric parameters of worked natural stone (according to the standard 4, 5 p.)
	Abrasion resistance (abrasion groove)	LST EN 14157	Abrasion testing by means of the wide wheel principle (Method A)
Concrete mixtures	Sample taking	LST EN 12350-1	Local and composite sampling
	Density	LST EN 12350-6	Weighing the compacted concrete mixture in a container of known volume and mass
	Slump flow	LST EN 12350-2	Evaluating the consistency of compacted concrete mix by measuring the slump distance after cone removal
	Air content	LST EN 12350-7	Pressure measurement method

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)		
Hardened concrete surfaces	concrete, products,	Thickness of concrete surface	LST EN 13863-1	Determination of thickness of concrete surface using a non-destructive method	
		Thickness of concrete surface	LST EN 13863-3	Determination of thickness of concrete surface using a destructive method, taking core samples	
		Shape and dimensions	LST EN 12390-1	Measurement of the dimensions of concrete specimens (cubes, cylinders, prisms)	
		Compressive strength	LST EN 12390-3	Compression of specimens to the point of collapse. Greatest destructive load 3000 kN	
		Density	LST EN 12390-7	Calculating from the determined mass and volume	
		Production and hardening of specimens	LST EN 12390-2	Form preparation and filling, concrete compaction, surface leveling, sample hardening and transportation	
		Water impermeability	LST 1974	Measurement by increasing water pressure from 0,2 to 1,2 MPa	
		Rebound index	LST EN 12504-2	Determination of rebound index using a sclerometer	
		Sample taking	LST EN 12504-1	Sample taking (core sample drilling), core sample inspection, preparation and compression to the point of collapse. Greatest destructive load 3000 kN	
		Compressive strength	LST EN 12504-1	Sample taking (core sample drilling), core sample inspection, preparation and compression to the point of collapse. Greatest destructive load 3000 kN	
Hardened concrete surfaces	concrete, products,	Depth of penetration of water	LST EN 12390-8	Measurement of depth of penetration of water under pressure	
		Water absorption	LST EN 13230-1	Method of determination of absorption of water by concrete, under atmospheric pressure	
		Sample taking	LST EN 1338 Annex B	A random sampling of typical products	
			LST EN 1339 Annex B		
			LST EN 1340 Annex B		
		Measurement of dimensions, inspection of visible characteristics	LST EN 1338 Annex C	Direct dimensional measurement methods Visual method	
			LST EN 1338 Annex J		
			LST EN 1339 Annex C		
		Tensile strength when splitting	Destructive load	LST EN 1339 Annex J	Crushing of specimens - splitting to disintegration
				LST EN 1340 Annex C	
		LST EN 1340 Annex J			

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)	
Hardened concrete surfaces	Bend strength Destructive load	LST EN 1339 Annex F	Bending of specimens to failure	
		LST EN 1340 Annex F		
	Water absorption	LST EN 13369 Annex F	Estimation of mass loss by weighing samples soaked and dried to constant weight	
		LST EN 1338 Annex E		
		LST EN 1339 Annex E		
		LST EN 1340 Annex E		
	Resistance to freezing	LST EN 1338 Annex D	Determination of mass loss of specimen per unit of area after freeze-thaw cycle	
		LST EN 1339 Annex D		
		LST EN 1340 Annex D		
		LST EN 13198 Annex B		
Abrasion resistance (abrasion groove)	LST 1428-17	Determination of change in compressive strength after freeze-thaw cycle		
	LST EN 1338 Annex G	Abrasion testing by means of the wide wheel principle		
	LST EN 1339 Annex G			
LST EN 1340 Annex G				
Skid resistance value (SRV)	LST EN 1338 Annex I	Pendulum method (SRV)		
	LST EN 1339 Annex I			
Cement	Sampling and preparation	LST EN 1340 Annex I	Sampling from bags, barrels and small containers; from large containers and vehicles (after loading or before unloading); when loading loose cement into vehicles or into silos; from silos	
		LST EN 196-7; LST EN 196-7/P		
	Compressive strength	LST EN 196-1		Compression of specimens to the point of collapse. Greatest destructive load 3000 kN
	Volume stability	LST EN 196-3		Le Chatelier mould needles displacement
	Setting times	LST EN 196-3		Measuring the depth of needle penetration using a Vicat apparatus
Normal consistency of cement mix	LST EN 196-3	Measuring the depth of rod penetration using a Vicat apparatus		

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)
Cement	Sulphate content	LST EN 196-2 4.4.2 p.	Gravimetry
	Chloride content	LST EN 196-2 4.5.16 p.	Titrimetry
	Alkali content	LST EN 196-2 4.5.19 p.	Flame photometry
	Calcination loss	LST EN 196-2 4.4.1 p.	Gravimetry
	Residue content	LST EN 196-2 4.4.3 p.	Gravimetry
	Milling residue on standard sieve (fineness)	LST EN 196-6	Sieving method
	Water-soluble hexavalent chromium content	LST EN 196-10 (except Annex A)	Spectrophotometry

* One degree of flexibility is defined and applicable for the whole accreditation scope: application of the updated documents of test methods/sampling already covered by accreditation or superseding them or application of equivalent documents.

Actual accreditation scope is published on the website at <http://www.lbc.lt/>

Note. In case of any discrepancies, ambiguities or disputes regarding the subject matter content between the English and Lithuanian versions of the document, the Lithuanian version shall prevail.

The accreditation certificate is signed with a qualified electronic signature as an attachment to the order of the Director of the National Accreditation Bureau, by which it was approved