



**Accredited to LST EN ISO/IEC 17025:2018**

**JSC CENTER OF LABORATORIAL TESTS**

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**SCOPE OF ACCREDITATION**

**(flexible)**

<b>Materials or products tested</b>	<b>Component, parameter or characteristic to be tested</b>	<b>Reference number of the document specifying test methods, clause (if relevant)</b>	<b>Techniques, methods and/or equipment used (where appropriate)</b>
<b>Aggregate (sand, crushed stone, mixtures, soil)</b>	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 and ships
	Specimen 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 from road surfaces	LST 1971	Manually
	Laboratory sample distribution	LST EN 932-2	Sample reduction by sample divider, quartering and screening
	Fractional composition	LST 1360.1	Sieving method
	Fractional composition	LST EN 933-1	Wet sieving or dry sieving method
	Fine particle content		Wet sieving method
	MB (MB <sub>F</sub> ) value	LST EN 933-9+A1	Methylene blue method
	Water content	LST EN 1360-3 6.p., 7.p.	Drying on an electric cooker or on a gas cooker; Drying in a microwave oven
	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	Weighing method, calculation method
	Particle density and water holding capacity	LST EN 1097-6	Pycnometric 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

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	Particle shape	LST EN 933-3	Bar sieving (grids) method
	Shape index	LST EN 933-4	Particle shape callipers
	Proportion of broken and crushed particles	LST EN 933-5 LST EN 933-5/A1	Visually selecting and determining the mass
	Shell content (SC)	LST EN 933-7	Selecting shells and shell fragments from coarse aggregate and determining the proportion of the mass
	Cleavage strength	LST 1476.7	The degree of aggregate fracturing when compressing in a standard cylinder
	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 5 p.; Annex A, A.2. p.	Los Angeles abrasion test method
	Impact test value $SZ$ Impact test value $SZ_{RB}$	LST EN 1097-2 6 p.; Annex A, A.3. p.	Impact test method
	Particle length	LST EN 13450, LST EN 13450/AC 6.7 p.	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 LST EN 13673/AC	Mass and strength reduction after immersion in boiling water
	Soil density	LST 1360-6, 7.2 p.	Core cutter method
	Efflux index (flow coefficient of fine aggregates)	LST EN 933-6	Aggregate flow time through a 2 mm opening
	Ratio of dry density and moisture content	LST EN 13286-2 LST EN 13286-2/AC	Proctor compaction test method
	Water-soluble chloride content	LST EN 1744-1+A1, 7 p.	Volhard method
	Water-soluble sulphate content	LST EN 1744-1+A1, 10.1 p.	Gravimetric method
	Acid-soluble sulphate content	LST EN 17441+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
	Water permeability	LST EN ISO 17892-11	Determination under stable pressure
	Fractional composition	LST EN 933-10	Air-drying and sieving method

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	Freeze-thaw resistance (mass loss)	LST EN 1367-1	Determination of mass loss after freeze-thaw cycle
	Soil particle density	LST 1360.7 part 3	Capillary pycnometer method
	Density, average density, density coefficient and porosity	LST 1361.7	Pycnometric, water displacement, measurement cylinder and wire basket methods
	Liquid and plastic limits	LST 1360.4	Casagrande and soil specimen rolling-out (by palm) test methods
<b>Road surface structure</b>	Dynamic deformation modulus	Instruction of test with dynamic device 1995	Test of the roadbed and base course with a falling weight deflectometer
	Load-bearing capacity	LST 1360-5	Determined with a structural load slab (slab diameter 300 mm)
	Unevenness of the surface of the layers	LST EN 13036-7:2004 LST EN 13036-7:2004/P:2009	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 calliper (gauge)
<b>Micro-aggregates (Filler aggregates)</b>	Micro-aggregate (filler aggregate) particle density	LST EN 1097-7	Pycnometric method
	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
	Void volume of dry compacted micro-aggregate (filler aggregate)	LST EN 1097-4:2008	Determination of void volume of dry compacted micro-aggregate (filler aggregate) with a Rigden apparatus
<b>Activated mineral powder</b>	Sample taking	LST 1419-1, 5.1 p.	From a dry bulk storage bunker, from a freight rail car, a vehicle, a batch of bags

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	Fractional composition	LST 1419-2, 4 p.	Wet sieving method
	Bitumen penetration index PI	LST 1419-2, 9 p.	Determination of consistency with a Vicat apparatus
	Moisture	LST 1419-2, 10 p.	Drying in a drying oven to a stable mass at a temperature of $(60 \pm 2)^{\circ}\text{C}$
	Hydrophobicity (dewetting)	LST 1419-2, 12 p.	Moistening for 24 h
	Density	LST 1419-2, 5.1 p.	Pycnometric method
<b>Road marking materials, vertical road signs, films for traffic safety and other elements</b>	Luminance coefficient, under diffuse illumination Qd; coefficient of retroreflected luminance RL	LST EN 1436 Annex A; B	Measurement of visibility of road marking materials in daytime and at night-time, with a retro reflectometer
	Thickness of coating of film (zinc, paint, varnish)	LST EN ISO 2808, method 7B.2	Electromagnetic induction principle
	Vertical road sign retro reflectivity coefficient RA	LST EN 12899-1, 4.1.1.4p. CIE 54.2, 5.5 p.	Measurement of reflectivity, with a retro reflectometer
<b>Bitumen, bituminous binders, emulsion</b>	Sample taking	LST EN 58	Sample taking in stationary systems
	Sample preparation	LST EN 12594	Methods of preparation of samples of bituminous binders, except bituminous emulsions
	Characterisation of perceptible properties	LST EN 1425	Organoleptic inspection of the sample
	Resistance to hardening, under heat and air	LST EN 12607-1	RTFOT method
	Penetration	LST EN 1426	Needle method
	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
<b>Bitumen, bituminous binders, emulsion</b>	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

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	Water content in bitumen emulsions	LST EN 1428	Azeotropic distillation method
	Recovered binder and oil distillate from bitumen emulsions by distillation	LST EN 1431	Distillation method
	Bitumen emulsions adhesive strength	LST EN 13614	Method of immersion in water
	Flash point and ignition temperature	LST EN ISO 2592 (except p. 8)	Cleveland open-cup method
	Density and specific gravity	LST EN 15326:2007+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
<b>Bituminous mixtures and surfaces</b>	Sample taking	LST EN 12697-27	From production equipment, vehicles and storage containers
	Temperature measurement	LST EN 12697-13	Measurement with a thermometer
	Fractional composition	LST EN 12697-2 +A1:	Sieving method
	Specimen preparation by impact compactor	LST EN 12697-30	Impact compaction method
	Specimen apparent (bulk) density	LST EN 12697-6	Dry specimen; saturated-surface-dry specimen (SSD); paraffin-embedded 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 callipers
	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	Pycnometric method

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	Thickness of surface	LST EN 12697-36	Measurement of a core sample with calipers
	Specimen preparation	LST EN 12697-33, 5.2.1 p.; 6 p.; 7.2 p.	By roller compactor
	Wheel tracking	LST EN 12697-22, 6.3 p.; 7.1 p.; 7.2.2 p.; 7.3 p. ; 7.4 p.; 8.3 p.; Model B; 9.3.2p.	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	Determination of water absorption value
	Affinity between aggregate and bitumen	LST EN 12697-11	Rotating bottle method
	Skid resistance and friction of road surface	LST EN 13036-4	Pendulum method
	Sample taking and preparation	LST EN 1015-2:2001 LST EN 1015-2:2001/A1:2007	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
<b>Building mortars, mixtures, hardened mortar</b>	Flow	LST EN 1015-3 LST EN 1015-3/A1 LST EN 1015-3/A2 LST EN 1015-3/P	Flow method
	Density	LST EN 1015-10 p.7 LST EN 1015-10/A1 LST EN 1015-10/P	Determination of specimen volume by means of water displacement

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	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
<b>Natural stone, setts (worked pavestones)</b>	Resistance to freezing	LST EN 12371 method "A"	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, 4 p. ir 5 p.	Measurement of the geometric parameters of worked natural stone
	Abrasion resistance (abrasion groove)	LST EN 14157 method A	Abrasion testing by means of the wide wheel principle (Method A)
<b>Concrete mixtures</b>	Sample taking	LST EN 12350-1	Local sample taking and joint sample taking
		LST 1551, 6.2 p. LST 1551/1K	Random selection
	Density	LST EN 12350-6	Calculation method
	Slump flow	LST EN 12350-2	Measurement of concrete mixture slump flow, using a standard cone
	Air content	LST EN 12350-7	Pressure gauge method
<b>Hardened concrete, concrete products, surfaces</b>	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)

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	Compressive strength	LST 1551.1 6 p. LST 1551.1/1K LST EN 12390-3	Compression of specimens to the point of collapse. Greatest destructive load 3000 kN
	Density	LST EN 12390-7	Measurement method
	Production and hardening of specimens	LST EN 12390-2	Methods of productions of specimens, conditions for marking, hardening and transporting
	Water impermeability	LST 1974 Annex O	Measurement of water pressure from (0.2 ÷ 1.2) MPa
	Rebound index	LST EN 12504-2	Determination of rebound index using a sclerometer
	Sample taking 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
	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 1338:2 Annex B LST EN 1338/AC LST EN 1338/P	Random selection
		LST EN 1339 Annex B LST EN 1339AC	Random selection
		LST EN 1340 Annex B LST EN 1340/AC	Random selection
	Measurement of dimensions, inspection of visible characteristics	LST EN 1338 AnnexC LST EN 1338/AC LST EN 1338/P LST EN 1338 AnnexJ LST EN 1338/AC LST EN 1338/P	Methods of measurement of dimensions  Visual inspection method
		LST EN 1339 AnnexC LST EN 1339/AC LST EN 1339Annex J LST EN 1339/AC	



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		LST EN 1340 AnnexC LST EN 1340/AC LST EN 1340 Annex J LST EN 1340/AC	
	Tensile strength when splitting Destructive load	LST EN 1338 AnnexF LST EN 1338/AC LST EN 1338/P	Compressive-splitting method
	Bend strength Destructive load	LST EN 1339AnnexF LST EN 1339/AC	Bending method
		LST EN 1340 Annex F LST EN 1340/AC	
<b>Hardened concrete, concrete products, surfaces</b>	Water absorption	LST EN 13369Annex F	Weighing method, immersing and drying to a stable mass
		LST EN 1338 AnnexE LST EN 1338/AC LST EN 1338/P	
		LST EN 1339 AnnexE LST EN 1339/AC	
		LST EN 1340Annex E LST EN 1340/AC	
	Resistance to freezing	LST EN 1338 AnnexD LST EN 1338/AC LST EN 1338/P	Determination of mass loss of specimen per unit of area after freeze-thaw cycle
		LST EN 1339Annex D LST EN 1339/AC	
		LST EN 1340Annex D LST EN 1340/AC	
		LST EN 13198 Annex B	
		LST 1428-17	Determination of change in compressive strength after freeze-thaw cycle
	Abrasion resistance (abrasion groove)	LST EN 1338 Annex G LST EN 1338/AC LST EN 1338/P	Abrasion testing by means of the wide wheel principle
		LST EN 1339 Annex G LST EN 1339/AC	
		LST EN 1340 Annex G LST EN 1340/AC	
	Skid resistance value (SRV)	LST EN 1338 Annex I LST EN 1338/AC LST EN 1338/P	Pendulum method (SRV)
		LST EN 1339 Annex I LST EN 1339/AC	

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		LST EN 1340 Annex I LST EN 1340/AC	
<b>Cement</b>	Sample taking and preparation	LST EN 196-7 LST EN 196-7/P	Local sample taking and joint sample taking
	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, 7 p.	Le Chatelier mould needles displacement
	Setting times	LST EN 196-3, 6 p.	Measurement of the depth of the needle penetration with a Vicat apparatus
	Normal consistency of cement mix	LST EN 196-3, 5 p.	Measurement of the depth of the rod penetration with a Vicat apparatus
	Sulphate content	LST EN 196-2, 4.4.2 p.	Gravimetric method
	Chloride content	LST EN 196-2 4.5.16 p.	Titrimetric method
	Alkali content	LST EN 196-2 4.5.19 p.	Flame photometric method
	Calcination loss	LST EN 196-2 4.4.1 p.	Gravimetric method
	Residue content	LST EN 196-2, 4.4.3 p.	Gravimetric method
	Milling residue on standard sieve (fineness)	LST EN 196-6	Sieving method
	Water-soluble hexavalent chromium content	LST EN 196-10 (except Annex A)	Spectrophotometric method

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 [www.lbc.lt](http://www.lbc.lt)