Republic of Bulgaria
Executive Agency
Bulgarian Accreditation Service

Signatory to the EA Multilateral Agreement in this field

ORDER

№ A 455

Sofia, 31.10.2023

Pursuant to Art. 10, para. 1, item 4, Art. 27, para. 3 the Law on National Accreditation of Conformity Assessment Bodies, item 6 of the BAS QR 2 Accreditation Procedure, in connection with an open procedure reg. № 13/29 ЛИ/ПА/24.02.2023, assessment report reg. № 13/29 ЛИ/4/В/03.07.2023 and statement Accreditation Commissiion reg. № А 13/29 ЛИ/ПА/5/В/10.10.2023, I hereby

RE-ACCREDIT

Road construction laboratory
at Road Company EAD

Management address: 1606 Sofia, 9, Lyulin Planina Str.
Laboratory address: 2140 Botevgrad, 44, Tsar Ivan Shishman Str.

I. STATIONARY OFFICE

To perform testing of:

Type of the scope: *flexible*			
№	**Tested Products**	**Type of Test/Characteristic**	**Testing methods (standard / validated method)**
1	**2**	**3**	**4**
1.	Rock materials: -aggregates for concrete (1); - for bitumen mixes and pavements of road, airstrip and other traffic areas (2); - for aggregate prism of railroads/crushed stone for railway	1.1. Particle size distribution	БДС EN 933-1 (1, 2, 3, 4)
		1.2. Content of fine fraction	БДС EN 933-1 (1, 2, 3)
		1.3 Flakiness index	БДС EN 933-3 (1, 2, 3)
		1.4. Shape index	БДС EN 933-4 (1, 2, 3)
		1.5. Determination of percentage of particles with: -crushed and broken surfaces -fully crushed and broken surfaces -fully rounded surfaces	БДС EN 933-5 (1, 2)
		1.6. Sand equivalent	БДС EN 933-8+A1 (1, 2)
		1.7. Methylene blue value	БДС EN 933-9 (1, 2, 4)

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Type of the scope: *flexible*			
№	**Tested Products**	**Type of Test/Characteristic**	**Testing methods (standard / validated method)**
1	**2**	**3**	**4**
	lines/ (3); - fine aggregates (4);	1.8. Resistance to wear (micro-Deval)	БДС EN 1097-1 (1, 2, 3)
		1.9. Resistance to fragmentation - Los Angeles Index	БДС EN 1097-2 (1, 2, 3)
		1.10. Loose bulk density	БДС EN 1097-3 (1, 2, 3)
		1.11. Percentage of voids	БДС EN 1097-3 (1, 2)
		1.12. Water content	БДС EN 1097-5 (1, 2, 3 , 4)
		1.13. Particle density: - apparent particle density; - dry particle density; - water-saturated particle density; -surface dry particle density	БДС EN 1097-6 Wire basket method (1, 2, 3) Pycnometer method (1, 2) Annex A (1, 2)
		1.14. Particle bulk density of coarse aggregate, saturated to constant mass	БДС EN 1097-6 Annex B (3)
		1.15. Water absorption	БДС EN 1097-6 Wire basket method (1, 2, 3) Pycnometer method (1, 2) Annex B (3)
		1.16. Particle density	БДС EN 1097-7 (4)
		1.17. Loss of mass after freezing and thawing cycles	БДС EN 1367-1 (1, 2, 3) БДС EN 13450+AC, Annex F (3)
		1.18. Loss of strength after determination of the resistance to freezing and thawing	БДС EN 1367-1 Annex B (3)
		1.19. Magnesium sulfate value (loss of mass in the Magnesium sulfate test - resistance to freezing and thawing)	БДС EN 1367-2 (1, 2, 3) БДС EN 13450+AC Annex G (3)
		1.20. Signs of Sonnenbrand	БДС EN 1367-3 БДС EN 1367-3/AC (3)
		1.21. Percentage loss in mass of basalt aggregate after boiling	БДС EN 1367-3 БДС EN 1367-3/AC (3)
		1.22. Loss of strength in mass of basalt aggregate after boiling	БДС EN 1367-3 БДС EN 1367-3/AC (3)
		1.23. Determination of the affinity between aggregate and bitumen (degree of retention of the bitumen film)	БДС EN 12697-11 (2) Method of stripping through boiling
		1.24. Fractioning resistance	БДС EN 206+A2/NA Annex NA. Q (1, 2)
		1.25. Particle length	БДС EN 13450+AC (3)
2.	Fresh concrete	2.1. Slump-test	БДС EN 12350-2
		2.2. Density	БДС EN 12350-6
		2.3. Temperature	БДС EN 206+A2/NA, cl. 5.2.9
3.	Hardened concrete	3.1. Compressive strength	БДС EN 12390-3

Type of the scope: *flexible*			
№	**Tested Products**	**Type of Test/Characteristic**	**Testing methods (standard / validated method)**
1	**2**	**3**	**4**
		3.2. Resistance to direct freezing and thawing -loss of mass; -loss of compressive strength	БДС EN 206+A2/NA Annex NA.0 cl. NA.O.1
		3.3. Density	БДС EN 12390-7 БДС EN 12390-7/AC
		3.4. Frost resistance: accelerated method through freeze-thaw in a sodium chloride solution - relative loss of mass	БДС EN 206+A2/NA Annex NA.0 cl. NA.O.2;
		3.5. Frost resistance: accelerated method through freeze-thaw in a sodium chloride solution - decrease of the ultrasound pulse velocity	БДС EN 206+A2/NA Annex NA.0 cl. NA.O.2; БДС EN 12504-4
		3.6 Compressive strength of core	БДС EN 12504-1 БДС EN 12504-1/AC; БДС EN 12390-3
4.	Bitumen and bituminous binders: - bitumen (1); -bitumen emulsion (2); Cut-back and fluxed bituminous binders (3)	4.1. Penetration	БДС EN 1426 (1)
		4.2. Softening point	БДС EN 1427 (1)
		4.3. Elastic recovery	БДС EN 13398 (1)
		4.4. Bitumen penetration, recovery from bituminous mixtures	БДС EN 12697-3+A1, БДС EN 1426 (1)
		4.5. Temperature of softening of bitumen, recovered from bituminous mixtures	БДС EN 12697-3+A1, БДС EN 1427 (1)
		4.6. Elastic recovery of bitumen, recovered from bituminous mixtures	БДС EN 12697-3+A1, БДС EN 13398 (1)
		4.7. Resistance to hardening at 163°C: change of mass	БДС EN 12607-1 (1)
		4.8 Resistance to hardening at 163°C: retained penetration	БДС EN 12607-1, БДС EN 1426 (1)
		4.9. Resistance to hardening at 163°C: change of softening point	БДС EN 12607-1, БДС EN 1427 (1)
		4.10. Elastic recovery of the residue after loss of mass	БДС EN 12607-1, БДС EN 13398 (1)
		4.11. Storage stability. Penetration difference between the upper and lower layer	БДС EN 13399, БДС EN 1426 (1)
		4.12. Storage stability. Softening point difference between the upper and lower layer	БДС EN 13399, БДС EN 1427 (1)
		4.13. Penetration of the reconstructed and stabilized binder	БДС EN 13074-1, БДС EN 13074-2, БДС EN 1426 (2, 3)
		4.14. Point of softening of the reconstructed and stabilized binder	БДС EN 13074-1, БДС EN 13074-2, БДС EN 1427 (2, 3)

Type of the scope: *flexible*			
№	**Tested Products**	**Type of Test/Characteristic**	**Testing methods (standard / validated method)**
1	**2**	**3**	**4**
		4.15. Elastic reconstruction of the reconstructed and stabilized binder	БДС EN 13074-1, БДС EN 13074-2, БДС EN 13398 (2)
		4.16. Solubility	БДС EN 12592(1, 3)
		4.17. Fraass breaking point	БДС EN 12593(1)
		4.18. Flash point	БДС EN ISO 2592 (1, 3)
		4.19. Density	БДС EN 15326+A1 (1, 3)
		4.20. Deformation energy, according to the forced ductility method	БДС EN 13589 (1)
		4.21. Efflux time /viscosity/	БДС EN 12846-1 (2)
		4.22. Efflux time /viscosity/	БДС EN 12846-2 (3)
		4.23. Distillation characteristics: - general cut at 360°C - % of the general cut, distillation fraction at 225°C - % of the general cut, distillation fraction at 260°C - % of the general cut, distillation fraction at 315°C	БДС EN 13358 (3)
		4.24. Appearance	БДС EN 1425 (2)
		4.25. Particle polarity	БДС EN 1430 (2)
		4.26. Binder residue after distillation	БДС EN 1431 (2)
		4.27. Residue on 0,5 mm sieve	БДС EN 1429 (2)
		4.28. Storage stability	БДС EN 1429 (2)
		4.29. Adhesivity with limestone material	БДС EN 13614 (2)
		4.30. pH	БДС EN 12850 (2)
		4.31. Mixing stability with cement	БДС EN 12848 (2)
5.	Construction soils	5.1. Particle size distribution	БДС EN 933-1
		5.2. Content of fine fraction	БДС EN 933-1
		5.3. Flakiness index	БДС EN 933-3
		5.4. Shape index	БДС EN 933-4
		5.5. Determination of percentage of particles with: -crushed and broken surfaces -fully crushed and broken surfaces -fully rounded surfaces	БДС EN 933-5
		5.6. Sand equivalent	БДС EN 933-8+A1
		5.7. Resistance to wear (micro-Deval)	БДС EN 1097-1
		5.8. Resistance to fragmentation - Los Angeles Index	БДС EN 1097-2
		5.9. Loose bulk density	БДС EN 1097-3
		5.10. Percentage of voids	БДС EN 1097-3

Type of the scope: *flexible*			
№	**Tested Products**	**Type of Test/Characteristic**	**Testing methods (standard / validated method)**
1	**2**	**3**	**4**
		5.11. Particle density: - apparent particle density - dry particle density - water-saturated particle density -surface dry particle density	БДС EN 1097-6 Wire basket method Pycnometer method Annex A
		5.12. Water absorption	БДС EN 1097-6 Wire basket method Pycnometer method
		5.13. Magnesium sulfate value (loss of mass in the Magnesium sulfate test - resistance to freezing and thawing)	БДС EN 1367-2
		5.14. Fractioning resistance	БДС EN 206+A1/NA, Annex NA.Q
		5.15. Maximum bulk density of the frame	БДС EN 13286-2 БДС 17146
		5.16. Optimum water content	БДС EN 13286-2 БДС 17146
		5.17. Compressive strength	БДС EN 13286-41
		5.18. California bearing ratio – CBR	БДС EN 13286-47
		5.19. Yield strength	Ordinance № РД-02-20-2/ 28.08.2018 on Road Design, issued by the Ministry of Regional Development and Public Works (MRDPW). Annex № 15
		5.20. Plastic limit	Ordinance № РД-02-20-2/ 28.08.2018 on Road Design, issued by the MRDPW. Annex № 16
		5.21. Plasticity indicator	Ordinance № РД-02-20-2/ 28.08.2018 on Road Design, issued by the MRDPW. Annex № 16
		5.22. California bearing ratio – CBR	Ordinance № РД-02-20-2/ 28.08.2018 on Road Design, issued by the MRDPW. Annex № 17
		5.23. Bulk density through substitute sand (wet state) Bulk density of the frame through substitute sand	Ordinance № РД-02-20-2/ 28.08.2018 on Road Design, issued by the MRDPW. Annex № 18
		5.24. Degree of compaction	Ordinance № РД-02-20-2/ 28.08.2018 on Road Design, issued by the MRDPW. Annex № 18 БДС 17146
		5.25. Water content	БДС EN ISO 17892-1/A1
		5.26. Bulk density (wet state) Dry state density	БДС EN ISO 17892-2 linear method with core pipe

Type of the scope: *flexible*			
№	**Tested Products**	**Type of Test/Characteristic**	**Testing methods (standard / validated method)**
1	**2**	**3**	**4**
		5.27. Particle density	БДС EN ISO 17892-3 linear method with core pipe
		5.28. Particle size distribution	БДС EIN ISO 17892-4
		5.29. Water permeability ratio	БДС EN ISO 17892-11 Solid-wall unyielding cylindrical permeameter method
		5.30. Yield strength	БДС EN ISO 17892-12
		5.31. Plastic limit	БДС EN ISO 17892-12
		5.32. Plasticity indicator	БДС EN ISO 17892-12
		5.33. Inequigranularity index	БДС EN 13242+A1/NA БДС EN ISO 14688-2
		5.34. Water permeability ratio of sand (fine rock aggregate)	БДС 8497
		5.35. Elasticity modulus in round-plate loading.	БДС 15130
		5.36. Deformation modulus in round-plate loading	БДС 15130
		5.37. E2/E1 deformation modulus ratio in round-plate loading	БДС 15130
6.	- Bituminous mixtures (1); -Bituminous mixtures - pavements (2)	6.1. Soluble binder content	БДС EN 12697-1 (1)
		6.2. Particle size distribution	БДС EN 12697-2+A1 (1)
		6.3. Maximum density	БДС EN 12697-5 (1)
		6.4. Bulk density	БДС EN 12697-6 (1)
		6.5. Voids characteristics	БДС EN 12697-8 (1)
		6.6. Voids characteristics in the mineral rock material	БДС EN 12697-8 (1)
		6.7. Voids filled with binder	БДС EN 12697-8 (1)
		6.8. Level of compaction	БДС EN 12697-9* (2)
		6.9. Bulk density - starting bulk density (core); - relative comparative density	БДС EN 12697-9*, БДС EN 12697-6 (2)
		6.10. Water sensitivity of bituminous specimens - indirect tensile strength	БДС EN 12697-12 (1)
		6.11. Temperature	БДС EN 12697-13 (1) Contact thermometer method
		6.12. Binder drainage	БДС EN 12697-18 (1) glass-vessel method
		6.13. Indirect tensile strength	БДС EN 12697-23 (1)
		6.14. Dimensions of a bituminous specimen: - height; - diameter;	БДС EN 12697-29 (1)
		6.15. Marshal stability (test)	БДС EN 12697-34 (1)
		6.16. Marshall flow (relative ductility)	БДС EN 12697-34 (1)

Type of the scope: *flexible*			
№	**Tested Products**	**Type of Test/Characteristic**	**Testing methods (standard / validated method)**
1	**2**	**3**	**4**
		6.17. Thickness of a bituminous pavement	БДС EN 12697-36 (2) Destructive Method
		6.18. Irregularity of pavement courses	БДС EN 13036-7 (2)
7.	Waterproofing of concrete bridge decks and other concrete surfaces trafficable by vehicles	7.1. Tensile strength	Technical Rules on the Design and Technology of Construction of Waterproofing of Reinforced Concrete Bridges of the Roads General Office, dated 1997, Annex 1

To perform sampling of:

Type of the scope: *flexible*		
№	**Product**	**Sampling methods (standard/validated method)**
1	2	3
1.	Rock materials: - aggregate for concrete; - for bitumen mixes and pavements of road, airstrip and other traffic areas; - for aggregate prism of railroads/crushed stone for railway lines/, - fine aggregates; Construction soils	БДС EN 932-1
2.	Bitumen and bituminous binders	БДС EN 58 From permanently installed systems; With submersible equipment: - surface sample vessel, - open tube; - vertical straight vessel; With split tubes With hand tools; By cone formation and quartering
3.	Bituminous mixtures	БДС EN 12697-27 From truckload; From bituminous mastic during unloading from a mixing container; From material positioned around the auger of an asphalting machine; From stockpiled loose workable material; From material placed but not roll-compacted by strip cutting; From laid and compacted material by core cutting; From hopper/asphalting machine; From stockpiled bitumen-coated material.
4.	Fresh concrete	БДС EN 12350-1
5.	Cured concrete	БДС EN 12604-1 БДС EN 12604-1/AC

II. MOBILE OFFICE

To perform testing of:

Type of scope: flexible			
No.	**Tested Products**	**Type of test/ Characteristic**	**Test methods (standardized / validated)**
1	2	3	4
1.	Rock materials: -aggregate for concrete (1); - for bitumen mixes and pavements of road, airstrip and other traffic areas (2); - fine aggregates (3);	1.1. Particle size distribution	БДС EN 933-1 (1, 2, 3)
		1.2. Content of fine fraction	БДС EN 933-1 (1, 2)
		1.3 Flakiness index	БДС EN 933-3 (1, 2)
		1.4. Shape index	БДС EN 933-4 (1, 2)
		1.5. Sand equivalent	БДС EN 933-8+A1 (1, 2)
		1.6. Water content	БДС EN 1097-5 (1, 2)
2.	Bitumen and bituminous binders - bitumen	2.1. Penetration	БДС EN 1426
		2.2. Softening point	БДС EN 1427
		2.3. Elastic recovery	БДС EN 13398
3.	Bituminous mixtures (1); Bituminous mixtures - pavements (2)	3.1. Soluble binder content	БДС EN 12697-1 (1)
		3.2. Particle size distribution	БДС EN 12697-2+A1 (1)
		3.3. Maximum density	БДС EN 12697-5 (1)
		3.4. Bulk density	БДС EN 12697-6 (1)
		3.5. Voids characteristics	БДС EN 12697-8 (1)
		3.6. Level of compaction	БДС EN 12697-9* (2)
		3.7. Bulk density - starting bulk density (core); - relative comparative density	БДС EN 12697-9* (2) БДС EN 12697-6 (2)
		3.8. Temperature	БДС EN 12697-13 (1) Contact thermometer method
		3.9. Dimensions of a bituminous specimen: - height; - diameter;	БДС EN 12697-29 (1)
		3.10. Marshal stability (test)	БДС EN 12697-34 (1)
		3.11. Marshall flow (relative ductility)	БДС EN 12697-34 (1)
		3.12. Thickness of a bituminous pavement	БДС EN 12697-36 (2) Destructive Method
4.	Fresh concrete	2.1. Slump-test	БДС EN 12350-2
		2.3. Temperature	БДС EN 206+A2/NA, cl. 5.2.9
5.	Construction soils	5.1. Particle size distribution	БДС EN 933-1
		5.2. Content of fine fraction	БДС EN 933-1
		5.3. Flakiness index	БДС EN 933-3
		5.4. Shape index	БДС EN 933-4
		5.5. Determination of percentage of particles with: -crushed and broken surfaces -fully crushed and broken surfaces -fully rounded surfaces	БДС EN 933-5
		5.6. Sand equivalent	БДС EN 933-8+A1
		5.7. Water content	БДС EN 1097-5 БДС EN ISO 17892-1/A1

Type of scope: flexible			
No.	**Tested Products**	**Type of test/ Characteristic**	**Test methods (standardized / validated)**
1	2	3	4
		5.8. Particle density: - apparent particle density - dry particle density - water-saturated particle density -surface dry particle density	БДС EN 1097-6 Wire basket method Pycnometer method Annex A
		5.9. Maximum bulk density of the frame	БДС EN 13286-2 Method with shape A Method with shape B БДС 17146 Method with shape H100 Method with shape H150
		5.10. Optimum water content	БДС EN 13286-2 Method with shape A Method with shape B БДС 17146 Method with shape H100 Method with shape H150
		5.11. California bearing ratio – CBR	БДС EN 13286-47
		5.12. Inequigranularity index	БДС EN 13242+A1/NA
		5.13. Yield strength	Ordinance № РД-02-20-2/ 28.08.2018 on Road Design, issued by the Ministry of Regional Development and Public Works (MRDPW). Annex № 15
		5.14. Plastic limit	Ordinance № РД-02-20-2/ 28.08.2018 on Road Design, issued by the MRDPW. Annex № 16
		5.15. Plasticity indicator	Ordinance № РД-02-20-2/ 28.08.2018 on Road Design, issued by the MRDPW. Annex № 16
		5.16. Bulk density through substitute sand (wet state) Bulk density of the frame through substitute sand	Ordinance № РД-02-20-2/ 28.08.2018 on Road Design, issued by the MRDPW. Annex № 18
		5.17. Degree of compaction	Ordinance № РД-02-20-2/ 28.08.2018 on Road Design, issued by the MRDPW. Annex № 18 БДС 17146
		5.18. Elasticity modulus in round-plate loading.	БДС 15130
		5.19. Deformation modulus in round-plate loading	БДС 15130
		5.20. E2/E1 deformation modulus ratio in round-plate loading	БДС 15130

To perform sampling of:

Type of the scope: *flexible*		
№	**Product**	**Sampling methods (standard/validated method)**
1	**2**	**3**
1.	Rock materials: - aggregate for concrete; - for bitumen mixes and pavements of road, airstrip and other traffic areas; - fine aggregates; Construction soils	БДС EN 932-1
2.	Bitumen and bituminous binders	БДС EN 58 From permanently installed systems; With submersible equipment: - surface sample vessel, - vertical straight vessel; With hand tools; By cone formation and quartering
3.	Bituminous mixtures	БДС EN 12697-27 From truckload; From bituminous mastic during unloading from a mixing container; From material positioned around the auger of an asphalting machine; From stockpiled loose workable material; From material placed but not roll-compacted by strip cutting; From laid and compacted material by core cutting; From hopper/asphalting machine; From stockpiled bitumen-coated material.
4.	Fresh concrete.	БДС EN 12350-1

**Repealed but not replaced standard with regard to the testing method.*

Flexible scope: *Implementing a new version of standards/documents or standards / documents replacing them is allowed. An updated list of standards/documents and their dated versions is provided by the laboratory.*

References:

1. Annex № 15 to Art. 160, item 3 of Ordinance № РД-02-20-2/28.08.2018 for road design: Determining the yield strength of soils;

2. Annex № 16 to Art. 160, item 3 of Ordinance № РД-02-20-2/28.08.2018 for road design: Method for determining the Plastic limit of soils and the plasticity indicator of soils;

3. Annex № 17 to Art. 161 and Art. 162 of Ordinance № РД-02-20-2/28.08.2018 for road design: Method for determining the California bearing ratio – CBR.

4. Annex № 18 to Art. 168 para. 1 of Ordinance № РД-02-20-2/28.08.2018 for road design: Method for determining the bulk density of construction soils in-situ, through substitute sand.

5. Technical Rules on the Design and Technology for the Construction of the Waterproofing of Reinforced Concrete Bridges of the Chief Office Roads: TRDTCWRCB/1997, Annex 1.

I ORDER

To issue the certificate of accreditation reg. № 29 ЛИ/31.10.2023, valid until 31.10.2027, and this order as an integral part of it.

The certificate of accreditation with the enclosure to be received by the Manager / representative of the Road Company EAD, the head of Road construction laboratory at Road Company EAD, or other authorized person in the office of EA BAS.

Upon receipt of the certificate and the enclosure issued, the the accredited person is obliged to return to EA BAS the originals of accreditation certificate reg. № 29 ЛИ/05.12.2022, valid until 31.10.2023 and its enclosure - EA BAS order, reg. № A 686/05.12.2022.

This order shall be notified to Road Company EAD, within 3 (three) days from its issuance.

Eng. Irena Borislavova

Executive Director of EA BAS