**SCOPE 52 ЛИ**

**Sofia, 15.07.2025**

**ROAD AND CONSTRUCTION LABORATORY LTD,**

**ROAD AND CONSTRUCTION LABORATORY**

**Management address:** 4000 Plovdiv, 76, Dunav Blvd.

**Laboratory addresses:** 4230 Asenovgrad, Severna Industrialna Zona, Asphalt Plant Patishta

**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. | Aggregates | 1.1. | Particle size distribution | БДС EN 933-1 |
| 1.2. | Shape index | БДС EN 933-4 |
| 1.3. | Overall flakiness index | БДС EN 933-3 |
| 1.4. | Loose bulk density | БДС EN 1097-3 |
| 1.5. | Magnesium sulfate value | БДС EN 1367-2 |
| 1.6. | Water content | БДС EN 1097-5 |
| 1.7. | Particle density:  - apparent particle density (ρa);  - oven-dried particle density (ρrd);  - saturated and surface-dried particle density (ρssd); | БДС EN 1097-6,  cl. 7, cl. 8 and cl. 9 |
| 1.8. | Water absorption | БДС EN 1097-6,  cl. 7, cl. 8 and cl. 9 |
| 1.9. | Fines content | БДС EN 933-1 |
| 1.10. | Sand equivalent | БДС EN 933-8+A1 |
| 1.11. | - Percentage of crushed particles  - Percentage of totally crushed particles,  - Percentage of totally rounded particles | БДС EN 933-5 |
| 1.12. | Maximum bulk density of skeleton. Optimum water content | БДС ЕN 13286-2, cl. 7.1, cl. 7.2, cl. 7.4, and cl. 7.5 |
| 1.13. | California bearing ratio | БДС ЕN 13286-47 |
| 2. | Bituminous mixtures | 2.1. | Particle size distribution | БДС ЕN 12697-2 |
| 2.2. | Soluble binder content | БДС ЕN 12697-1,  Annex B, cl. B.2.1 |
| 2.3. | Maximum density | БДС ЕN 12697-5 |
| 2.4. | Bulk density | БДС ЕN 12697-6 |
| 2.5. | Air voids content | БДС ЕN 12697-8, cl. 4 |
| 2.6. | Stability | БДС ЕN 12697-34 |
| 2.7. | Flow | БДС ЕN 12697-34 |
| 2.8. | Compaction degree | БДС EN 12697-9\*\* |
| 2.9. | Thickness of a bituminous layer | БДС EN 12697-36, cl. 6.1 |
| 2.10. | Binder drainage | БДС EN 12697-18 cl. 5 |
| 3. | Construction soils | 3.1. | Particle size distribution | БДС EN 933-1 |
| 3.2. | Liquid limit | Ordinance № РД-02-20-2 of MRDPW, Annex № 15 |
| 3.3. | Plastic limit  Plasticity index | Ordinance № РД-02-20-2 MRDPW, Annex № 16 |
| 3.4. | Maximum bulk density of skeleton. Optimum water content | БДС 17146, cl. 3.3 –  test type Н100, М100, Н150, М150 |
| 3.5. | Water content | БДС 644\*\* |
| 3.6. | Elastic and deformation moduli by the round plate load test:  - Elastic modulus, Eavg;  - Deformation moduli E1, E2;  - Deformation moduli ratio E2/E1; | БДС 15130 |
| 3.7. | Bulk density of the skeleton by the sand replacement method | Ordinance № РД-02-20-2 of MRDPW, Annex №18 |
| 4. | Hardened concrete | 4.1. | Density | БДС EN 12390-7 |
| 4.2. | Compressive strength | БДС EN 12390-3 |
| 5. | Fresh concrete | 5.1. | Slump | БДС EN 12350-2 |
| 6. | Bitumens and bituminous binders | 6.1. | Penetration | БДС EN 1426 |
| 6.2. | Softening point | БДС EN 1427 |
| 6.3. | Elastic recovery | БДС EN 13398 |

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

**To perform sampling of:**

| **Type of the scope:** *Flexible\** | | |
| --- | --- | --- |
| **№** | **Product** | **Sampling methods**  **(standard/validated method)** |
| 1 | 2 | 3 |
| 1. | Aggregates | БДС EN 932-1, cl. 8.3 and cl. 8.8 |
| 2. | Bituminous mixtures | БДС ЕN 12697-27, cl. 4.1, cl. 4.3 and cl. 4.7 |
| 3. | Fresh concrete | БДС EN 12350-1 |
| 4. | Construction soils | БДС EN 13286-1,  БДС EN 932-1, cl. 8.8 |

***\*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 “Method for the determination of the liquid limit of soils” to Art. 160, item 3 of Ordinance № РД-02-20-2 of 28.08.2018 for road design of Ministry of Regional Development and Public Works /MRDPW/, promulgated in SG № 79/2018, amended in SG № 90/2018, in force from 26.10.2018;

2. Annex № 16 “Method for the determination of the plastic limit and plasticity index of soils” to Art. 160, item 3 of Ordinance № РД-02-20-2 of 28.08.2018 for road design of Ministry of Regional Development and Public Works /MRDPW/, promulgated in SG № 79 of 2018, amended in SG № 90 of 2018, in force from 26.10.2018;

3. Annex № 18 “Method for the determination of the in-situ bulk density of construction soils using sand replacement” to Art. 161, table 39 and Art 162, table 40 of Ordinance № РД-02-20-2 of 28.08.2018 for road design of Ministry of Regional Development and Public Works /MRDPW/, promulgated in SG № 79/2018, amended in SG № 90/2018, in force from 26.10.2018.