**SCOPE 196 ЛИ**

**Sofia, 28.10.2024**

**PATNO STROITELSTVO JSC**

**CONSTRUCTION LABORATORY**

**Management address**: 7200 Razgrad, 120 Knyaz Boris Str.

**Laboratory address**: 7218 Poroishte, Razgrad Region, Boaza Area

**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. | Asphalt mixtures (1)  Compacted asphalt layers (2) | 1.1 Volumetric density (1) | БДС EN 12697-6 |
| 1.2 Maximal density (1) | БДС EN 12697-5 |
| 1.3 Asphalt test body dimensions (1) | БДС EN 12697-29 |
| 1.4 Air pores in asphalt test bodies/Residual porosity/ (1) | БДС EN 12697-8, cl. 4 |
| 1.5 Stability by the Marshall Method (1) | БДС EN 12697-34 |
| 1.6 Conventional plasticity by the Marshall Method (1) | БДС EN 12697-34 |
| 1.7 Content of a soluble binding substance (1) | БДС EN 12697-1,  Appendix B cl. 2.1 |
| 1.8 Particle size distribution (1) | БДС EN 12697-2+A1 |
| 1.9 Comparative density (2) | БДС EN 12697-9\* |
| 1.10 Degree of compaction (2) | БДС EN 12697-9\* |
| 1.11 Asphalt pavement thickness (2) | БДС EN 12697-36  cl. 6.1 |
| 1.12 Asphalt test bodies water sensitivity (1) | БДС EN 12697-12 |
| 1.13 Indirect tensile strength of asphalt test bodies (1) | БДС EN 12697-23 |
| 2. | Rock materials (1)  Construction soils (2) | 2.1 Grain size composition (1) | БДС EN 933-1 |
| 2.2 Grain content under 0.063 mm (1) | БДС EN 933-1 |
| 2.3 Index of flat grain (1) | БДС EN 933-3 |
| 2.4 Shape coefficient (1) | БДС EN 933-4 |
| 2.5 Grain density /ρa, ρrd, ρssd /(1) | БДС EN 1097-6  cl. 7, cl. 8 and cl. 9  Appendix A and Appendix B |
| 2.6 Water absorption (1) | БДС EN 1097-6  cl. 7, cl. 8 and cl. 9  Appendix B |
| 2.7 Fine aggregate particles density. (1) | БДС EN 1097-7 |
| 2.8 Volumetric bulk density (1) | БДС EN 1097-3 |
| 2.9 Water content (1) | БДС EN 1097-5 |
| 2.10 Sand equivalent (1) | БДС EN 933-8+А1 |
| 2.11 Crushing resistance / Los Angeles/ (1) | БДС EN 1097-2 |
| 2.12 Evaporation resistance magnesium sulfate test /Frost resistance/ (1) | БДС EN 1367-2 |
| 2.13 Percentage of  - Partially crushed grains;  - Completely crushed grains;  - Completely rounded grains. (1) | БДС EN 933-5 |
| 2.14 Leak (flow) limit (2) | AASHTO T89 |
| 2.15 Plasticity index.  Plasticity limit (drain) (2) | AASHTO T90 |
| 2.16 Comparative density and water content. Proctor. (2) | БДС EN 13286-2 |
| 2.17 Coefficient of CBR portability (2) | БДС EN 13286-47 |
| 2.18 Volumetric density on place by the Replacing sand Method (2) | AASHTO T191 |
| 2.19 Elastic and deformation modulus. Relationship between the deformation modules. E2/E1 (2) | БДС 15130 |
| 2.20 Content of noxious fine admixtures - methylene blue (1) | БДС EN 933-9 |
| 2.21 Voids in a fine aggregate. (1) | БДС EN 1097-4 |
| 2.22 Determination of adhesion between rock material and bitumen (1) | БДС EN 12697-11,  cl. 7 |
| 3. | Bitumen and bituminous binders | 3.1 Penetration | БДС EN 1426 |
| 3.2 Softening point.  (Ring and ball Method) | БДС EN 1427 |
| 4. | Concrete | 4.1 Compression strenqth | БДС EN 12390-3 |
| 5. | Concrete mixtures | 5.1 Compaction | БДС EN 12350-2 |

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

**To perform sampling of:**

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| --- | --- | --- |
| **Type of the scope:** *flexible for part of the scope* | | |
| **№** | **Product** | **Sampling methods**  **(standard/validated method)** |
| 1. | 2 | 3 |
| 1. | Asphalt mixtures | БДС EN 12697-27 |
| 2. | Rock materials | БДС EN 932-1 |
| 3. | Bitumen and bituminous binders | БДС EN 58 |
| 4. | Concrete and concrete mixture | БДС EN 12350-1 |

***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 laboratory.*