**SCOPE 147 ЛИ**

**Sofia, 10.05.2024**

**TRA EOOD**

**CONSTRUCTION TESTING CENTRE**

**Management address:** 1345 Sofia, Zaharna Fabrika, 1 Kukush Str.

**Laboratory addresses:** 1. 1510 Sofia, Hadzhi Dimitar, 7, Rezbarska Str.

 2. 8009 Burgas, Meden Rudnik Territory, Area Nad Dzhambazlare

 3. 6410 Krepost, Dimitrovgrad Municipality, Area Dolna Cheshma

**1. Construction Testing Centre, Sofia, at TRA EOOD**

1510 Sofia, Hadzhi Dimitar, 7 Rezbarska Str.

**To perform testing of**:

| **Type of the scope:** *flexible* |
| --- |
| **№** | **Tested products** | **Type of test/ characteristic** | **Testing methods****(standard/ validated method)** |
| **1** | **2** | **3** | **4** |
|  | Cement | Standard consistence | БДС EN 196-3 cl. 5 |
| Determination of initial setting time | БДС EN 196-3 cl. 6; Annex А |
| Determination of final setting time  | БДС EN 196-3 cl. 6; Annex А |
| Soundness test | БДС EN 196-3 cl. 7 |
| Compressive strength | БДС EN 196-1 |
|  | Coares / All-inaggregate | Particle size distribution | БДС EN 933-1 |
| Fine content | БДС EN 933-1 |
| Shells content | БДС EN 933-7 |
| Shape index | БДС EN 933-4 |
| Overall flakiness index  | БДС EN 933-3 |
| Percent of: - crushed particles; - totally crushed particles; - totally rounded particles  | БДС EN 933-5  |
| Polished Stone Value | БДС ЕN 1097-8 |
| Water content | БДС EN 1097-5 |
| Loose bulk density | БДС EN 1097-3  |
| Compacted dry bulk density  | БДС EN 1097-3, Annex D  |
| Particle density: - Specific particle density - Bulk oven- dried particle density  - Bulk saturated and surface-dried particle density  - Specific density of pre-dried particles | БДС EN 1097-6Wire basket method/ Pyknometer method |
| Void content  | БДС EN 1097-3  |
| Water absorption | БДС EN 1097-6, Wire basket method/ Pyknometer method |
| Loss of mass during freezing and thawing | БДС EN 1367-1 |
| Magnesium sulfate value  | БДС EN 1367-2 |
| Resistance to crushing | БДС ЕN 206+А2/ NA Annex NА.Q |
| Resistance to wear (micro- Deval coefficient) | БДС EN 1097-1  |
| Resistance to fragmentation – Los Angeles coefficient  | БДС EN 1097-2 |
| Affinity between aggregate and bitumen – boiling water stipping method | БДС EN 12697-11  |
| Loss of strength of basalt aggregate | БДС EN 1367-3 |
| Loss of mass of basalt aggregate | БДС EN 1367-3 |
| Content of water-soluble chlorides  | БДС EN 1744-1+А1 cl. 7;  |
| Content of acid soluble chlorides  | БДС EN 1744-5 |
| Total sulfur content | БДС EN 1744-1+А1 cl. 11.1 |
| Content of water soluble sulfate | БДС EN 1744-1+А1 cl. 10.1 |
| Content of acid soluble sulfates  | БДС EN 1744-1+А1 cl. 12 |
| Сontent of lightweight contaminators | БДС EN 1744-1+А1 cl. 14.2 |
| Сontent of humus | БДС EN 1744-1+А1 cl. 15.1 |
| Total content of water-soluble salts | БДС 11301 cl. 2 |
|  | Artificial / Mixed - coarse  - all-in aggregate | Loss of mass of silicate disintegration after steaming and treatment with sodium sulphate | БДС 14610 cl. 4.1.1  |
| Iron and manganese disintegration | БДС 14610 cl. 4.1.2  |
| Mass loss in lime disintegration | БДС 14610 cl. 4.1.3  |
|  | Recycled / Mixed - coarse  - all-inaggregate  | Influence of the aggregate extract in initial setting time of cement | БДС EN 1744-6 |
| Content of constituents: - floating particles;- concrete, concrete products, mortar, concrete masonry units; - unbound aggregate, natural stone, hydraulically bound aggregate; - clay masonry units (bricks and tiles);calcium silicate masonry units, aerated non-floating concrete; - bituminous materials;- glass;- other: cohesive (clay and soil), metals (ferrous and nonferrous), non-floating wood, plastic, rubber and gypsum plaster | БДС ЕN 933-11 |
|  | Pipe and fitting parts made of unreinforced/ steel fibre/ reinforced concrete | Geometric characteristics:- nominal size- internal length of the body | БДС EN 1916 cl. 3.1.16 and cl. 3.1.17 |
| Watertightness under hydrostatic test | БДС EN 1916, Annex Е cl. Е.4 |
| Crush strength:- load during test (cracking)- limit (destructive) load - result of an effective crushing  | БДС EN 1916, Annex С |
| Water absorption of concrete | БДС EN 1916, Annex F |
|  | Fine / All-in aggregate  | Particle size distribution | БДС EN 933-1 |
| Fine content | БДС EN 933-1 |
| Water content | БДС EN 1097-5 |
| Void content  | БДС EN 1097-3  |
| Water absorption | БДС EN 1097-6 Pyknometer method |
| Magnesium sulfate value  | БДС EN 1367-2 |
| Sand equivalent value | БДС ЕN 933-8+А1  |
| Methylene blue value | БДС EN 933-9 |
| Content of water-soluble chlorides  | БДС EN 1744-1+А1 cl. 7;  |
| Content of acid soluble chlorides | БДС EN 1744-5 |
| Total sulfur content | БДС EN 1744-1+А1 cl. 11.1 |
| Content of water soluble sulfate | БДС EN 1744-1+А1 cl. 10.1 |
| Content of acid soluble sulfates  | БДС EN 1744-1+А1 cl. 12 |
| Сontent of lightweight contaminators  | БДС EN 1744-1+А1 cl. 14.2 |
| Сontent of humus | БДС EN 1744-1+А1 cl. 15.1 |
| Total content of water-soluble salts | БДС 11301 cl. 2 |
| Module of fineness  | БДС EN 12620, Annex В |
| Particle density: - Specific particle density - Bulk oven- dried particle density  - Bulk saturated and surface-dried particle density  - Specific density of pre-dried particles | БДС EN 1097-6, Pyknometer method |
| Loose bulk density | БДС EN 1097-3  |
| Compacted dry bulk density | БДС EN 1097-3, Annex D  |
|  | Filler / Mineral filler  | Particle size distribution | БДС EN 933-1  |
| Water content / moisture | БДС EN 1097-5;БДС 2880 cl. 2.1.4 |
| Specific density | БДС 2880 cl. 2.2.1  |
| Particle density | БДС EN 1097-7 |
| Methylene blue value | БДС EN 933-9 |
| Change of softening point by delta ring and ball test | БДС EN 13179-1 |
| Content of water-soluble chlorides  | БДС EN 1744-1+А1 cl. 7;  |
| Content of acid soluble chlorides | БДС EN 1744-5 |
| Total sulfur content | БДС EN 1744-1+А1 cl. 11.1 |
| Content of water soluble sulfate | БДС EN 1744-1+А1 cl. 10.1 |
| Content of acid soluble sulfates  | БДС EN 1744-1+А1 cl. 12 |
| Total content of water-soluble salts | БДС 11301 cl. 2 |
|  | Construction soils / Aggregates for unbound and hydraulically bound mixtures / All-in aggregate | Water content | БДС EN 1097-5;БДС EN ISO 17892-1; БДС EN ISO 17892-1/A1 |
| Particle size distribution  | БДС EN ISO 17892-4 cl. 5.2; БДС EN 933-1 |
| Uniformity coefficient | БДС EN ISO 14688-2 |
| Liquid limit | БДС EN ISO 17892-12; БДС EN ISO 17892-12/A1;БДС EN ISO 17892-12/A2; Annex №15 of Ordinance № РД-02-20-2, SG 79/2018  |
| Plastic limit | БДС EN ISO 17892-12;БДС EN ISO 17892-12/A1;БДС EN ISO 17892-12/A2; Annex №16 of Ordinance № РД-02-20-2, SG 79/2018 |
| Plasticity index | БДС EN ISO 17892-12; БДС EN ISO 17892-12/A1;БДС EN ISO 17892-12/A2; Annex №16 of Ordinance № РД-02-20-2, SG 79/2018 |
| Density of solid particles  | БДС EN ISO 17892-3 cl. 5.1 |
| Compressive strength | БДС EN 13286-41 |
| Bulk density - linear measurement method | БДС EN ISO 17892-2 cl. 5.1 |
| Bulk density - method by immersion in liquid | БДС EN ISO 17892-2 cl. 5.2 |
| Density in dry condition | БДС EN ISO 17892-2 cl. 6.3 |
| Optimum water content  | БДС 17146; БДС EN 13286-2 |
| Normal maximum density of skeleton | БДС 17146  |
| Modified maximum density of skeleton | БДС 17146  |
| Maximum density of skeleton by „Proctor”  | БДС EN 13286-2 |
| Maximum density of skeleton by modified „Proctor” | БДС EN 13286-2 |
| Elastic module | БДС 15130 |
| Deformation module | БДС 15130, Ordiance №55, Art. 47, SG 18/2004 |
| Deformation modules ratio | БДС 15130 |
| California Bearing Ratio  | БДС EN 13286-47;Annex № 17 of Ordinance № РД-02-20-2, SG 79/2018 |
| Swelling | БДС EN 13286-47 |
| Bulk density by substitute sand | Annex № 18 of Ordinance № РД-02-20-2, SG 79/2018 |
| Bulk density of skeleton by substitute sand  | Annex № 18 of Ordinance № РД-02-20-2, SG 79/2018 |
| Degree of compaction | БДС 17146 cl. 1.8, Annex № 18 of Ordinance № РД-02-20-2, SG 79/2018 |
|  | Fresh concretes | Air content | БДС EN 12350-7 cl. 6; Annex B and, Annex D  |
| Slump | БДС EN 12350-2 |
| Density | БДС EN 12350-6 |
| Flow table test | БДС EN 12350-5 |
|  | Hardened concrete | Density | БДС EN 12390-7 cl. 6.1.2 а) and b); БДС EN 992 |
| Compressive strength | БДС EN 12390-3; БДС EN 1354 |
| Tensile splitting strength  | БДС EN 12390-6  |
| Flexural strength | БДС EN 12390-5 |
| Water impermeability | БДС ЕN 206+А2/ NA, Annex NA. N |
| Depth of penetration of water under pressure | БДС EN 12390-8 |
| Frost resistance: - Relative loss of mass  - Relative reduction of compressive strength  | БДС ЕN 206+А2/ NA Annex NA.О part NA.О.1 |
| Frost resistance | [CD CEN /TS 12390-9](http://www.bds-bg.org/bg/standard/?natstandard_document_id=45135) cl. 5 |
| Determination of rebound number | БДС ЕN 12504-2 |
| Compressive strength on site | БДС EN 13791; БДС EN 13791/ NA  |
| Bond strength by pull-off | ASTM D 7234; БДС EN 1542  |
|  | Sprayed concrete | Energy absorption capacity | БДС ЕN 14488-5 |
| Compressive strength of young sprayed concrete | БДС EN 14488-2 |
|  | Construction mortars | Bulk density of fresh mortar | БДС EN 1015-6; БДС EN 1015-6/ A1 |
| Particle size distribution | БДС EN 1015-1; БДС EN 1015-1/ A1 |
| Dry bulk density of hardened mortar | БДС EN 1015-10; БДС EN 1015-10/ A1 |
| Flexural strength | БДС EN 1015-11  |
| Compressive strength | БДС EN 1015-11  |
| Adhesive strength on substrates | БДС EN 1015-12 |
|  | Construction mortars for screed materials | Flexural strength | БДС EN 13892-2 |
| Compressive strength | БДС EN 13892-2 |
|  | Grout concrete for the groove injecting of the reinforcement strained | Fluidity | БДС EN 445 cl. 4.3.1 |
| Compressive strength | БДС EN 445 cl. 4.6 |
|  | Natural stones | Water absorption | БДС 12159 cl. 4 |
| Single-sided compressive strength | БДС EN 1926 |
| Water absorption coefficient by capillarity | БДС EN 1925 |
|  | Concrete flags | Shape and dimensions: - difference in diagonals - length - width - thickness  | БДС EN 1339, Annex С |
| Thickness of cover layer | БДС EN 1339, Annex С |
| Failure load | БДС EN 1339, Annex F |
| Bending strength | БДС EN 1339, Annex F  |
| Water absorption | БДС EN 1339, Annex E |
| Measuring of abrasion according to the Böhme test | БДС EN 1339, Annex H |
| Loss of mass after test freeze – thaw with de-icing salt  | БДС EN 1339, Annex D |
| Unpolished slip resistance  | БДС EN 1339, Annex I  |
|  | Concrete kerb units  | Shape and dimensions: - length / length of the recess - width  - height / height of the recess | БДС EN 1340, Annex С |
| Thickness of cover layer | БДС EN 1340, Annex С  |
| Bending strength | БДС EN 1340, Annex F |
| Water absorption | БДС EN 1340, Annex E  |
| Measuring of abrasion according to the Böhme test | БДС EN 1340, Annex H  |
| Loss of mass after test freeze – thaw with de-icing salt  | БДС EN 1340, Annex D  |
| Unpolished slip resistance  | БДС EN 1340, Annex I |
|  | Concrete paving blocks  | Shape and dimensions:- difference in diagonals - length - width - thickness | БДС EN 1338, Annex С |
| Thickness of cover layer | БДС EN 1338, Annex С  |
| Failure load  | БДС EN 1338, Annex F |
| Strength of splitting | БДС EN 1338, Annex F |
| Water absorption | БДС EN 1338, Annex E |
| Measuring of abrasion according to the Böhme test | БДС EN 1338, Annex H |
| Loss of mass after test freeze – thaw with de-icing salt | БДС EN 1338, Annex D |
| Unpolished slip resistance  | БДС EN 1338, Annex I |
|  | Concrete slabs for lining the road trenches | Geometric dimensions and shape:- length- width- heigth- difference in diagonals- cracks / holes | БДС 11482 cl. 3.1  |
| Flexural tensile strength | БДС 11482 cl. 3.2  |
| Water absorption | БДС 11482 cl. 3.3 |
| Loss of mass / tensile strength in bending immediately after freezing and thawing | БДС 11482 cl. 3.4 и cl. 3.2 |
|  | Concrete furrow for draining of the road embankment | Geometric dimensions:- length- width in big / small base - thickness of wall- height in big / small base | БДС 11483 |
| Holes - depth - area | БДС 11483 |
|  | Masonry units | Geometric dimensions and shape:- length- width- heigth- thickness of enclosing / partitioning partitions- depth of aperture | БДС EN 772-16 |
| Water absorption - water absorption coefficient due to capillary- initial rate of water absorption | БДС EN 772-11 |
| Compressive strength | БДС EN 772-1+А1 |
| Water absorption | БДС EN 772-7 |
| Dry density:- gross density- net density | БДС EN 772-13 |
|  | Manholes and inspection chambers unreinforced/ steel fibre/ reinforced concrete  |  Geometric characteristics:- nominal size- internal height | БДС EN 1917 cl.3.1.16 and cl. 3.1.19 |
| Watertightness under hydrostatic test | БДС EN 1917, Annex С, cl. 4 |
| Strength:- load during test- result of an effective crushing - limit (destructive) load - vertical load by test | БДС EN 1917, Annex A, Annex B |
| Water absorption of concrete | БДС EN 1917, Annex D |
|  | Precast concrete elements. Normal weight and lightweight concrete shuttering block  | Geometric characteristics:- length- width- heigth- width of the hollow core- length of the hollow core- length of the cantilevered end | БДС EN 15435 cl. 5.1БДС EN 772-16 |
| Water absorption due to capillary | БДС EN 772-11 |
| Compressive strength | БДС EN 772-1+А1 |
| Bending strength of the walls | БДС EN 15435, Annex B |
| Gross dry density | БДС EN 15435 cl. 4.5 |
|  | Bitumen and bituminous binders  | Penetration | БДС EN 1426 |
| Softening point  | БДС EN 1427 |
| Fraass breaking point | БДС EN 12593 |
| Elastic recovery | БДС EN 13398 |
| Flash point in open cup | БДС EN ISO 2592 |
| Solubility | БДС EN 12592 |
| Resistance to hardening- change in mass | БДС EN 12607-1 |
| -retained penetration |
| -change in softening point |
|  | Bituminous mixtures | Bulk density  | БДС EN 12697-6 |
| Maximum density | БДС EN 12697-5 |
| Air voids content | БДС EN 12697-8 cl. 4 |
| Stability | БДС EN 12697-34 |
| Flow | БДС EN 12697-34 |
| Soluble binder content | БДС EN 12697-1, Annex В, cl. В.1.7 |
| Particle size distribution  | БДС EN 12697-2+A1 |
| Strength of indirect tensile | БДС EN 12697-23 |
| Temperature  | БДС EN 12697-13 |
| Coefficient of strength under indirect tensile loading, ITSR (Sensitivity to water) | БДС EN 12697-12, Method А |
| Binder drainage | БДС EN 12697-18 cl. 5 |
|  | Laid and compacted bituminous layers | Bending of bituminous pavement | БДС 15131 |
| Irregularity of pavement courses:-Transverse -Longitudinal  | БДС EN 13036-7 |
| Thickness of a bituminous layer | БДС EN 12697-36 cl. 6.1 |
| Bulk density: - of layer / core / slice- standard (reference)  | БДС EN 12697-6 |
|  Degree of compaction | БДС EN 12697-9\* |
|  | Grouted anchors | Tendor end displacement | БДС EN ISO 22447-5 cl. 10.4 |
| Determination of the creep rate | БДС EN ISO 22447-5 cl. 10.4; Annex A |
| Apparent free lenght | БДС EN ISO 22447-5 cl. 10.4; Annex D |

\*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** |
|  | Cement | БДС EN 196-7 |
|  | Coarse / Fine / All-in aggregate | БДС EN 932-1 |
|  | Artificial / Mixed - coarse  - all-in aggregate | БДС EN 932-1; БДС 14610 cl.3 |
|  | Recycled / Mixed - coarse  - all-in aggregate | БДС EN 932-1 |
|  | Filler / Mineral filler | БДС EN 932-1 cl.8.3; cl. 8.4; cl. 8.5 and cl. 8.7;  |
|  | Construction soils / Aggregates for unbound and hydraulically bound mixtures / All-in aggregate  | БДС EN 932-1; БДС 17146 cl. 5 |
|  | Fresh concretes | БДС EN 12350-1 |
|  | Hardened concrete | БДС EN 12504-1 |
|  | Sprayed concrete | БДС ЕN 14488-1 |
|  | Construction mortars | БДС EN 1015-2 cl. 5 and cl. 6; БДС EN 1015-2/ A1  |
|  | Construction mortars for screed materials | БДС EN 13892-1 cl. 3; cl. 4 and cl. 5 |
|  | Concrete flags | БДС EN 1339 cl. 6.2; Annex А and Annex B |
|  | Concrete kerb units | БДС EN 1340 cl. 6.2; Annex А and Annex B |
|  | Concrete paving blocks | БДС EN 1338 cl. 6.2; Annex А and Annex B |
|  | Concrete furrow for draining of the road embankment | БДС 11483 cl. 2 |
|  | Bitumen and bituminous binders | БДС EN 58 cl. 8.1 and cl. 8.2.1 |
|  | Bituminous mixtures | БДС EN 12697-27 cl. 4.1; cl. 4.3; cl. 4.4 and cl. 4.6 |
|  | Laid and compacted bituminous layers | БДС EN 12697-27 cl. 4.7 |

2. Construction Testing Centre, Burgas, at TRA EOOD

8009 Burgas, Meden Rudnik Territory, Area Nad Dzhambazlare

To perform testing of:

| **Type of the scope:** *flexible* |
| --- |
| **№** | **Tested products** | **Type of test/ characteristic** | **Testing methods****(standard/ validated method)** |
| **1** | **2** | **3** | **4** |
|  | Coarse / All-in aggregate | Particle size distribution | БДС EN 933-1 |
| Fine content | БДС EN 933-1 |
| Shape index | БДС EN 933-4 |
| Overall flakiness index  | БДС EN 933-3 |
|  | Fine / All-in aggregate | Particle size distribution | БДС EN 933-1 |
| Fine content | БДС EN 933-1 |
| Sand equivalent value | БДС ЕN 933-8+А1 |
|  | Filler / Mineral filler | Water content | БДС EN 1097-5 |
| Particle size distribution | БДС EN 933-1 |
|  | Construction soils / Aggregates for unbound and hydraulically bound mixtures | Water content | БДС EN 1097-5 |
| Particle size distribution  | БДС EN 933-1 |
| Elastic module | БДС 15130 |
| Deformation module | БДС 15130, Ordiance №55, Art. 47, SG 18/2004 |
| Deformation modules ratio | БДС 15130 |
| Bulk density by substitute sand | Annex № 18 of Ordinance № РД-02-20-2, SG 79/2018 |
| Bulk density of skeleton by substitute sand  | Annex № 18 of Ordinance № РД-02-20-2, SG 79/2018 |
|  | Bitumen and bituminous binders | Penetration | БДС EN 1426 |
| Softening point | БДС EN 1427 |
|  | Bituminous mixtures | Bulk density  | БДС EN 12697-6 |
| Maximum density | БДС EN 12697-5 |
| Air voids content | БДС EN 12697-8 cl.4 |
| Stability | БДС EN 12697-34 |
| Flow | БДС EN 12697-34 |
| Soluble binder content | БДС EN 12697-1, Annex В, cl. В.1.7 |
| Particle size distribution | БДС EN 12697-2+A1 |
| Temperature  | БДС EN 12697-13 |
|  | Laid and compacted bituminous layers | Thickness of a bituminous layer | БДС EN 12697-36 cl. 6.1 |
| Bulk density: - of layer / core / slice- standard (reference)  | БДС EN 12697-6 |
|  Degree of compaction | БДС EN 12697-9\* |
|  | Fresh concretes | Slump | БДС EN 12350-2 |
|  | Hardened concrete | Density | БДС EN 12390-7 cl. 6.1.2 b) |
| Compressive strength | БДС EN 12390-3;  |

 \*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. | Coarse / Fine / All-in aggregate | БДС EN 932-1 |
| 2. | Filler / Mineral filler | БДС EN 932-1 cl. 8.3; cl. 8.4; cl. 8.5 and cl. 8.7 |
| 3. | Construction soils/ Aggregates for unbound and hydraulically bound mixtures | БДС EN 932-1; БДС 17146 cl. 5 |
| 4. | Bitumen and bituminous binders | БДС EN 58 cl. 8.1 and cl. 8.2.1 |
| 5. | Bituminous mixtures | БДС EN 12697-27 cl. 4.1; cl. 4.3; cl. 4.4 and cl. 4.6 |
| 6. | Laid and compacted bituminous layers | БДС EN 12697-27 cl. 4.7 |
| 7. | Fresh concretes | БДС EN 12350-1 |

3. Construction Testing Centre, Krepost, at TRA EOOD

6410 Krepost, Dimitrovgrad Municipality, Area Dolna cheshma

**To perform testing of:**

| **Type of the scope*:*** *flexible* |
| --- |
| **№** | **Tested products** | **Type of test/ characteristic** | **Testing methods****(standard/ validated method)** |
| **1** | **2** | **3** | **4** |
|  | Coarse / All-in aggregate | Particle size distribution | БДС EN 933-1 |
| Fine content | БДС EN 933-1 |
| Water content | БДС EN 1097-5 |
| Shape index | БДС EN 933-4 |
| Overall flakiness index  | БДС EN 933-3 |
|  | Fine / All-in aggregate | Particle size distribution | БДС EN 933-1 |
| Fine content | БДС EN 933-1 |
| Water content | БДС EN 1097-5 |
| Sand equivalent value  | БДС ЕN 933-8+А1 |
|  | Filler / Mineral filler | Water content | БДС EN 1097-5 |
| Particle size distribution | БДС EN 933-1 |
|  | Construction soils / Aggregates for unbound and hydraulically bound mixtures | Water content | БДС EN ISO 17892-1;БДС EN ISO 17892-1/A1; |
| Particle size distribution  | БДС EN 933-1 |
| Elastic module | БДС 15130 |
| Deformation module | БДС 15130, Ordiance № 55, Art.47, SG 18/2004 |
| Deformation modules ratio | БДС 15130 |
| Bulk density by substitute sand | Annex № 18 of Ordinance № РД-02-20-2, SG 79/2018 |
| Bulk density of skeleton by substitute sand  | Annex № 18 of Ordinance № РД-02-20-2, SG 79/2018 |
|  | Bitumen and bituminous binders | Penetration | БДС EN 1426 |
| Softening point | БДС EN 1427 |
|  | Bituminous mixtures | Bulk density  | БДС EN 12697-6 |
| Maximum density | БДС EN 12697-5 |
| Air voids content | БДС EN 12697-8 cl. 4 |
| Stability | БДС EN 12697-34 |
| Flow | БДС EN 12697-34 |
| Soluble binder content | БДС EN 12697-1, Annex В, cl. В.1.7 |
| Particle size distribution | БДС EN 12697-2+A1 |
|  | Laid and compacted bituminous layers | Thickness of a bituminous layer | БДС EN 12697-36 cl. 6.1 |
| Bulk density: - of layer / core / slice- standard (reference)  | БДС EN 12697-6 |
|  Degree of compaction | БДС EN 12697-9\* |

\*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. | Coarse/ Fine */* All-in aggregate | БДС EN 932-1 |
| 2. | Filler/ Mineral filler | БДС EN 932-1, cl. 8.3; cl. 8.4; cl. 8.5; cl. 8.7 |
| 3. | Construction soils/ Aggregates for unbound and hydraulically bound mixtures | БДС EN 932-1; БДС 17146, cl. 5 |
| 4. | Bituminous mixtures | БДС EN 12697-27, cl. 4.1; cl. 4.3; cl. 4.4 and cl. 4.6 |

***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.*

**References:**

Annex № 15 to Art. 160 item 3 of Ordinance № РД-02-20-2, SG 79/2018 - method for determining the Liquid limit.

Annex № 16 to Art. 160, item 3 of Ordinance № РД-02-20-2, SG 79/2018 - method for determining the Plastic Limit and Plasticity Index.

Annex № 17 to Art. 161 Table 39 and Article 162 Table 40 of Ordinance № РД-02-20-2, SG 79/2018 - method for determining California Bearing Capacity Index.

Annex № 18 to Art. 168, para. 1 of Ordinance № РД-02-20-2, SG 79/2018 - Method for determining the volumetric density of construction soils in place through substitute sand.

Ordinance № 55, Art. 47 of 29.01.2004 on the design and construction of railway lines, railway stations, level crossings and other elements of the railway infrastructure, promulgated in SG № 18/05.03.2004, amended by SG № 20/12.03.2004, and by SG № 42/21.05.2004.