**SCOPE 7 ЛИ**

**Sofia, 26.04.2024**

**NJN LTD**

**LABORATORY COMPLEX**

**Management address:** 6300 Haskovo, 43 Svetlina Str.

**Laboratory address:** 6300 Haskovo, Kamenets, 3 Planisnki Izgled Str.

**To perform testing of:**

| **Type of the scope:** *flexible* | | | |
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| **№** | **Tested Products** | **Type of Test/Characteristic** | **Testing methods**  **(standard / validated method)** |
| **1** | **2** | **3** | **4** |
| 1. | Concrete mixture | 1.1. Slump | БДС EN 12350-2 |
| 1.2. Density | БДС EN 12350-6 |
| 1.3. Air content | БДС EN 12350-7, cl. 6 |
| 1.4. Slump-flow test | БДС EN 12350-8 |
| 2. | Hardened concrete | 2.1. Compressive strength | БДС EN 12390-3 |
| 2.2. Flexural strength | БДС EN 12390-5 |
| 2.3. Density | БДС EN 12390-7 |
| 2.4. Depth of penetration of water under pressure | БДС EN 12390-8 |
| 2.5. Waterproofness | БДС EN 206/ NA, App. NA. N |
| 2.6. Frost resistance by direct freezing and thawing:  • Weight loss;  • Compressive strength loss | БДС EN 206/ NA,  App. NA. O.1 |
| 2.7. Frost resistance. Accelerated method:  • Weight loss;  • Decrease in the speed of an ultrasonic pulse; | БДС EN 206/ NA,  App. NA. O.2  БДС EN 12504-4 |
| 3. | Supplementary materials for (1):  concrete; solutions;  Rock materials for (2):  - bituminous mixtures and pavements for roads, airfields and other transport areas;  - unbound and hydraulically bound mixtures for use in construction equipment and in road construction.  Crushed stone for railway lines; (3)  Crushed stone for mosaic and plaster; (4)  Fine fillers for concrete, solutions and bituminous mixtures (5) | 3.1 Particle size distribution; | БДС EN 933-1 (1, 2, 3, 4, 5) |
| 3.2. Content of fine fraction; | БДС EN 933-1 (1, 2, 3, 4, 5) |
| 3.3. Flakiness index; | БДС EN 933-3 (1, 2, 3, 4) |
| 3.4. Shape index; | БДС EN 933-4 (1, 2, 3, 4) |
| 3.5. Percentage content of:  • crushed or broken particles  • completely crushed or broken particles  • rounded particles  • completely rounded particles; | БДС EN 933-5/A1 (1, 2, 3, 4) |
| 3.6. Shell content; | БДС EN 933-7 (1, 2, 3, 4) |
| 3.7. Sand equivalent; | БДС EN 933-8+A1  (1, 2, 3, 4, 5) |
| 3.8. Grading content of fine fillers; | БДС EN 933-10(5) |
| 3.9. Constituents of coarse recycled rock materials; | БДС EN 933-11  (1, 2, 3, 4) |
| 3.10. Resistance to wear (micro-Deval); | БДС EN 1097-1  (1, 2, 4)  БДС EN 1097-1 App., A(3) |
| 3.11. Resistance to fragmentation by the Los Angeles method; | БДС EN 1097-2, cl. 5  (1 2 4);  БДС EN 1097-2 App., A (3) |
| 3.12. Fragmentation under static load; | БДС EN 206 /NA, App. NA.Q (1, 2, 4) |
| 3.13. Sand fineness module; | БДС EN 12620+A1, App. B (1, 2, 5) |
| 3.14. Loose bulk density; | БДС EN 1097-3  (1, 2, 3, 4, 5) |
| 3.15. Percentage of voids; | БДС EN 1097-3  (1, 2, 3, 4, 5) |
| 3.16. Water content; | БДС EN 1097-5  (1, 2, 3, 4, 5) |
| 3.17. Particle density  • Specific particle density;  • Volume particle density in dry state  • Specific particle density (water-saturated and surface-dry) | БДС EN 1097-6  (1, 2, 3, 4, 5) |
| 3.18. Water absorption; | БДС EN 1097-6  (1, 2, 3, 4, 5) |
| 3.19. Resistance to freezing and thawing; | БДС EN 1367-1  (1, 2, 3, 4)  БДС EN 13450, App. F (3) |
| 3.20. Weather resistance of rock materials:  • magnesium sulphate value; | БДС EN 1367-2  (1, 2, 3, 4)  БДС EN 13450, App. G (3) |

**To perform sampling of:**

| **Type of the scope:** *flexible* | | |
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| **№** | **Products** | **Sampling method (standardized/validated)** |
| **1** | **2** | **3** |
| 1. | Concrete mixture | БДС EN 12350-1 |
| 2. | Supplementary materials for:  concrete; solutions.  Rock materials for:  - bituminous mixtures and pavements for roads, airfields and other transport areas;  - unbound and hydraulically bound mixtures for use in construction equipment and in road construction;  Crushed stone for railway lines;  Crushed stone for mosaic and plaster;  Fine fillers for: concrete, solutions and bituminous mixtures. | БДС EN 932-1 |

***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 the laboratory.*