

Declaration of Performance

DOP/0-16 Landfill/30-1-2020 (replaces version of 1-1-2019)

The undersigned, representing
LAVA MINING AND QUARRYING S.A.
 19,3 km Markopoulou Avenue 19002 Paiania Attica - Greece
Declares that

PUMICE (0/16mm Landfill), Lightweight aggregate for bound and unbound applications
Conforms to the Annex ZA of the harmonized European Standard: EN 13055-2:2004
CPR ANNEX V System 2+

The Notified Body Bureau Veritas Certification Denmark A/S, Oldenborggade 1B, 7000 Fredericia, Tlf. 77 31 10 00, identified No. 0615, performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control, and issued the certificate of constancy of conformity of the factory production control (0615-CPR-9984).

| Loose bulk density (wet) (Mg/m ³) | 0,770 (Min/Max: 0,670/0,870) | EN 1097-3 | | | | | | | | | | | | |
|---|---|-------------------------------|-------------|-----------|------|----|--------|---|----|-------|---|----|-------|-------------------------|
| Particle density (Mg/m ³) | NPD ⁽²⁾ | EN 1097-6, annex C | | | | | | | | | | | | |
| Grading (%) | <table border="1"> <thead> <tr> <th>Sieve (mm)</th> <th>Passing (%)</th> <th>Range (%)</th> </tr> </thead> <tbody> <tr> <td>12.5</td> <td>95</td> <td>90-100</td> </tr> <tr> <td>8</td> <td>37</td> <td>27-47</td> </tr> <tr> <td>4</td> <td>18</td> <td>10-26</td> </tr> </tbody> </table> | Sieve (mm) | Passing (%) | Range (%) | 12.5 | 95 | 90-100 | 8 | 37 | 27-47 | 4 | 18 | 10-26 | EN 933-1 ⁽³⁾ |
| | Sieve (mm) | Passing (%) | Range (%) | | | | | | | | | | | |
| | 12.5 | 95 | 90-100 | | | | | | | | | | | |
| 8 | 37 | 27-47 | | | | | | | | | | | | |
| 4 | 18 | 10-26 | | | | | | | | | | | | |
| Fines (%) | NPD ⁽²⁾ | EN 933-1 ⁽³⁾ | | | | | | | | | | | | |
| Water content | 16-26% | EN 1097-5(calc upon wet mass) | | | | | | | | | | | | |
| Water absorption (%) | NPD ⁽²⁾ | EN 1097-6, annex C | | | | | | | | | | | | |
| BulkCrushing resistance (N/mm ²) | NPD ⁽²⁾ | EN 13055-1, annex A | | | | | | | | | | | | |
| Percentage of crushed particles (%) | NPD ⁽²⁾ | EN 933-5 | | | | | | | | | | | | |
| Resistance to disintegration (%) | NPD ⁽²⁾ | EN 13055-1:, annex B | | | | | | | | | | | | |
| Freezing and thawing resistance (%) | NPD ⁽²⁾ | EN 13055-2:, annex B | | | | | | | | | | | | |
| Water Suction height | NPD ⁽²⁾ | EN 1097-10 | | | | | | | | | | | | |
| Compaction and load bearing capacity | NPD ⁽²⁾ | EN 13055-2, annex A | | | | | | | | | | | | |
| Resistance to cyclic compressive loading | NPD ⁽²⁾ | EN 13286-7 | | | | | | | | | | | | |
| Resistance to thermal shock | NPD ⁽²⁾ | EN 1367-5 | | | | | | | | | | | | |
| Resistance to polishing | NPD ⁽²⁾ | EN 1097-8 | | | | | | | | | | | | |
| Resistance to wear by abrasion from studded tyres | NPD ⁽²⁾ | EN 1097-9 | | | | | | | | | | | | |
| Compatibility between LWA and bitumen | N/A ⁽¹⁾ | EN 12697-11 | | | | | | | | | | | | |
| Water Soluble Chloride (%) | NPD ⁽²⁾ | EN 1744-1:, clause 7 | | | | | | | | | | | | |
| Water soluble sulphate (%) | NPD ⁽²⁾ | EN 1744-1:, clause 10 | | | | | | | | | | | | |
| Thermal conductivity | N/A ⁽¹⁾ | EN 12664 or EN 12667 | | | | | | | | | | | | |
| Dangerous substances. In particular: | | | | | | | | | | | | | | |
| Emission of radioactivity | | | | | | | | | | | | | | |
| Release of heavy metals | NPD ⁽²⁾ | | | | | | | | | | | | | |
| Release of polyaromatic carbons | | | | | | | | | | | | | | |

⁽¹⁾Not Applicable, ⁽²⁾ No Performance Determined, ⁽³⁾: dry sieving

The performance of the product identified above as PUMICE 0/16mm Landfill is in conformity with the declared values. The present Declaration of Performance is established under the full responsibility of LAVA SA.

Signed on behalf of the manufacturer
Date: 30/1/2020

Full Name: E. Christoforakis
Position: Manager