

Declaration of Performance

0/16

DOP/0-16/30-01-2021 (replaces version of 01-06-2020)

**The undersigned, representing
LAVA MINING AND QUARRYING S.A.**

32, D. Solomou str., GR14123 - Lykovrissi Attica Greece

Declares that

**PUMICE (0/16mm), Lightweight aggregate for concrete, mortar and grout
Conforms to the Annex ZA of the harmonized European Standard: EN 13055-1:2002
CPR ANNEX V System 2+**

The Notified Body Bureau Veritas Certification Denmark A/S, Oldenborggade 25-31 DK-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/9981).

| Loose bulk density (wet) (Mg/m ³) | 0,770 (Min/Max: 0,670/0,870) | EN 1097-3 | | | | | | | | | | | | |
|---|--|--|-------------|-----------|------|----|--------|---|----|-------|---|----|-------|-------------------------|
| Apparent Particle density ρ_{La} (Mg/m ³) Oven dry Particle density ρ_{Lrd} (Mg/m ³) | 1.65±0.15 1.00±0.15 | EN 1097-6:, annex C | | | | | | | | | | | | |
| Grading (%) | <table border="1" style="margin-left: auto; margin-right: auto;"> <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 ⁽²⁾ |
| Sieve (mm) | Passing (%) | Range (%) | | | | | | | | | | | | |
| 12.5 | 95 | 90-100 | | | | | | | | | | | | |
| 8 | 37 | 27-47 | | | | | | | | | | | | |
| 4 | 18 | 10-26 | | | | | | | | | | | | |
| Fines (%) | <10% | EN 933-1 ⁽²⁾ | | | | | | | | | | | | |
| Water absorption (%) | 36±10% | EN 1097-6: annex C | | | | | | | | | | | | |
| Water content | 16-26% | EN 1097-5(calc upon wet mass) | | | | | | | | | | | | |
| Crushing resistance (N/mm ²) | NPD ⁽¹⁾ | EN 13055-1, annex A | | | | | | | | | | | | |
| Percentage of crushed particles (%) | NPD ⁽¹⁾ | EN 933-5 | | | | | | | | | | | | |
| Resistance to disintegration (%) | NPD ⁽¹⁾ | EN 13055-1, annex B | | | | | | | | | | | | |
| Freezing and thawing resistance (%) | max 3.7% | EN 13055-1 annex C | | | | | | | | | | | | |
| Chloride (%) | <0.050% | EN 1744-1, clause 7 | | | | | | | | | | | | |
| Acid soluble sulfate (%) | < 0.10% | EN 1744-1, clause 12 | | | | | | | | | | | | |
| Total sulfur (%) | < 0.10% | EN 1744-1: clause 11 | | | | | | | | | | | | |
| Organic contaminators (%) | No harmful contaminators | EN 1744-1 15.1, 15.2 | | | | | | | | | | | | |
| Alkali – silica reactivity | Non reactive | ASTM C289, XP-P18594 | | | | | | | | | | | | |
| Dangerous substances. In particular: | | | | | | | | | | | | | | |
| Emission of radioactivity | Radiologically suitable for safe use | Radiation Protection 112, European Commission 1999 | | | | | | | | | | | | |
| Release of heavy metals | As <4ppm, Cd <0.4ppm, Cr <20 ppm, Cu <5ppm, Hg <0.05ppm, Pb <13ppm, Ni <6 ppm, Zn <20 ppm | In accordance with NEN 6950 (destruction in accordance with NEN 6961, measurement in accordance with NEN 6966); In house method (destruction in accordance with NEN 6961 and equivalent to NEN-EN 16174, measurement with ISO 22036 and in accordance with NEN-EN 16170) | | | | | | | | | | | | |
| Release of polyaromatic carbons | Organic carbon is not present in pumice | ISO 10694 | | | | | | | | | | | | |

⁽¹⁾ No Performance Determined, ⁽²⁾: dry sieving

The performance of the product identified above as PUMICE 0/16mm 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: 30/1/2021

Full Name: E. Christoforakis

Position: Manager