

Declaration of Performance

DOP/2-10/30-01-2021 (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 (2/10mm), 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 (dry) (Mg/m ³)	0.61 (0.51-0.71)	EN 1097-3																					
Loose bulk density (wet) (Mg/m ³)	0.75(Min/Max: 0.65/0.85)																						
Apparent Particle density ρ_{La} (Mg/m ³)	1.72±0.15	EN 1097-6:, annex C																					
Oven dry Particle density ρ_{Lrd} (Mg/m ³)	1.14±0.15																						
Grading (%)	<table border="1"> <thead> <tr> <th>Sieve (mm)</th> <th>Passing (%)</th> <th>Range (%)</th> </tr> </thead> <tbody> <tr> <td>10</td> <td>99</td> <td>95-100</td> </tr> <tr> <td>8</td> <td>88</td> <td>80-96</td> </tr> <tr> <td>6.3</td> <td>60</td> <td>48-72</td> </tr> <tr> <td>4</td> <td>33</td> <td>22-44</td> </tr> <tr> <td>3.15</td> <td>18</td> <td>11-25</td> </tr> <tr> <td>2</td> <td>14</td> <td>9-19</td> </tr> </tbody> </table>	Sieve (mm)	Passing (%)	Range (%)	10	99	95-100	8	88	80-96	6.3	60	48-72	4	33	22-44	3.15	18	11-25	2	14	9-19	EN 933-1 ⁽²⁾
	Sieve (mm)	Passing (%)	Range (%)																				
	10	99	95-100																				
	8	88	80-96																				
	6.3	60	48-72																				
	4	33	22-44																				
3.15	18	11-25																					
2	14	9-19																					
Fines (%)	≤10%	EN 933-1 ⁽²⁾																					
Water absorption (%)	30±10%	EN 1097-6: annex C																					
Water content	19-33%	EN 1097-5 (on dry mass)																					
	16-26%	EN 1097-5 (on wet mass)																					
Crushing resistance (N/mm ²)	4 N/mm ²	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 2/10mm 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