

Supplementary Material

Table S1. Amount of product retained according to different type of analyses for Noto stone.

| Analysis | Quantity of Product Retained (kg/m ²) | | | |
|----------|---|---------------|---------------|---------------|
| | ET B1 | ET B2 | CA B1 | CA B2 |
| WAC/ DR | 0.101 ± 0.009 | 0.051 ± 0.019 | 0.122 ± 0.026 | 0.013 ± 0.002 |
| WVP | 0.028 ± 0.002 | 0.017 ± 0.001 | 0.017 ± 0.001 | 0.010 ± 0.000 |
| MIP | 0.208 ± 0.005 | 0.033 ± 0.002 | 0.047 ± 0.013 | 0.025 ± 0.001 |
| CM | 0.028 ± 0.003 | – | 0.057 ± 0.013 | – |
| UPV/DRMS | 0.044 ± 0.035 | – | 0.084 ± 0.019 | – |

Notes: WAC, Water absorption through capillarity; WVP, water vapour permeability; MIP, mercury intrusion porosimetry; CM, colorimetric measurement; UPV, ultrasonic pulse velocity; DRMS, drilling resistance measurement system.

Table S2. Amount of product retained according to different type of analyses for Vicenza stone.

| Analysis | Quantity of Product Retained (kg/m ²) | | | |
|----------|---|---------------|---------------|---------------|
| | ET B1 | ET B2 | CA B1 | CA B2 |
| WAC/ DR | 0.060 ± 0.010 | 0.025 ± 0.009 | 0.108 ± 0.008 | 0.040 ± 0.001 |
| WVP | 0.011 ± 0.002 | 0.019 ± 0.001 | 0.027 ± 0.007 | 0.014 ± 0.001 |
| MIP | 0.039 ± 0.001 | 0.053 ± 0.006 | 0.038 ± 0.030 | 0.062 ± 0.001 |
| CM | 0.014 ± 0.003 | – | 0.113 ± 0.025 | – |
| UPV/DRMS | 0.012 ± 0.002 | – | 0.210 ± 0.030 | – |

Notes: WAC, Water absorption through capillarity; WVP, water vapour permeability; MIP, mercury intrusion porosimetry; CM: colorimetric measurement; UPV: ultrasonic pulse velocity; DRMS: drilling resistance measurement system.

Table S3. Amount of product retained according to different type of analyses for Lecce stone.

| Analysis | Quantity of product retained (kg/m ²) | | | |
|----------|---|---------------|---------------|---------------|
| | ET B1 | ET B2 | CA B1 | CA B2 |
| WAC/ DR | 0.115 ± 0.016 | 0.114 ± 0.027 | 0.097 ± 0.021 | 0.010 ± 0.003 |
| WVP | 0.026 ± 0.002 | 0.019 ± 0.001 | 0.028 ± 0.008 | 0.012 ± 0.000 |
| MIP | 0.016 ± 0.011 | 0.025 ± 0.001 | 0.063 ± 0.008 | 0.022 ± 0.006 |
| CM | 0.026 ± 0.002 | – | 0.047 ± 0.005 | – |
| UPV/DRMS | 0.065 ± 0.002 | – | 0.012 ± 0.002 | – |

Notes: WAC, Water absorption through capillarity; WVP, water vapour permeability; MIP, mercury intrusion porosimetry; CM, colorimetric measurement; UPV, ultrasonic pulse velocity; DRMS, drilling resistance measurement system.