

High Efficiency Fluorinated Oligo (ethylenesuccinamide) Coating for Stones

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Citation: Camaiti, M.; Bortolotti, V.; Cao, Y.; Papacchini, A.; Salvini, A.; Brizi, L. High Efficiency Fluorinated oligo(ethylenesuccinamide) Coating for Stone. *Coatings* **2021**, *11*, 452. <https://doi.org/10.3390/coatings11040452>

Received: 2 March 2021

Accepted: 9 April 2021

Published: 14 April 2021

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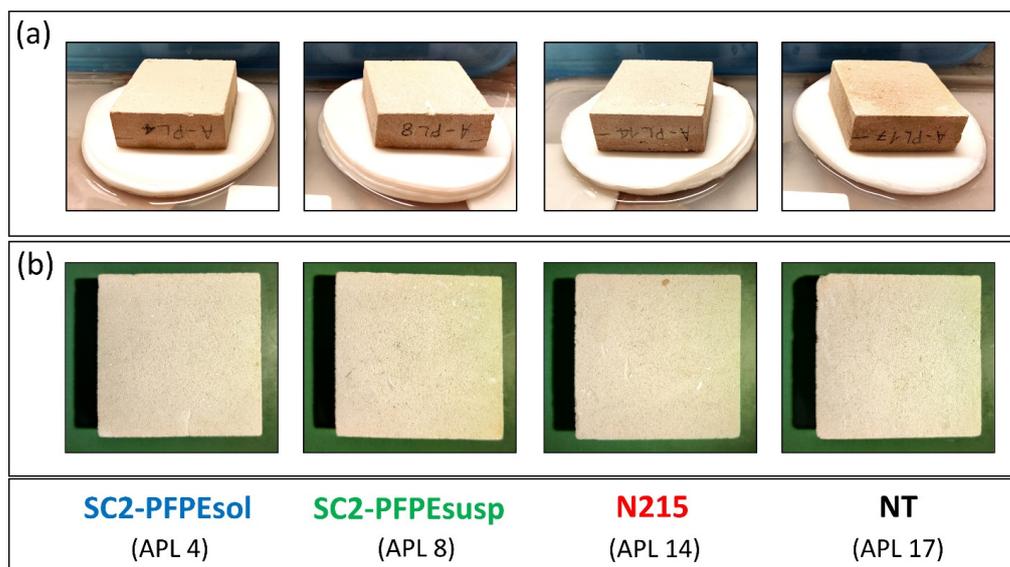


Figure S1. Photos of coated and untreated Lecce stone specimens after 3 years from the treatment and aging with 3 cycles of water capillary absorption (Abs). The specimens APL4 and APL8 were coated with SC2-PFPEsol and SC2-PFPEsusp respectively, while APL 14 with N215. APL17 is the untreated specimen. a) The specimens after 30 min of water capillary absorption. The absorption of the specimens APL4, APL 8 and APL 14 was carried out through the coated face. The water uptake is evident in APL17 (completely wet) and APL 14 (wet up to half height), while the APL 4 and APL 8 specimens show limited water absorption; b) the coated/untreated surface of the same specimens in dry conditions.

Table S1. Estimated average surface to volume ratio for coated and uncoated Lecce stone samples computed through Equation (6) with fit error corresponding as one standard deviation.

Coating	$S/V \text{ (m}^{-1}\text{)} \times 10^5$	R^2
NT (APL 16)	1.2 ± 0.1	0.95
SC2-PFPEsol (APL 1)	1.6 ± 0.3	0.99
SC2-PFPEsusp (APL 2)	1.3 ± 0.2	0.99
N215 (APL 6)	1.8 ± 0.3	0.99

Table S2. Effective diffusion coefficients estimated from the highest intensity peak of D - T_2 correlation maps and expressed as average values with uncertainties $\sim 5\%$ corresponding to one standard deviation.

$\Delta \text{ (}\mu\text{s)}$	$D_{\text{eff}} \text{ (m}^2\text{/s)} \times 10^{-9}$			
	SC2-PFPEsol APL 1	SC2-PFPEsusp APL 2	N215 APL 6	NT APL 16
4	1.79	2.21	2.11	2.21
12	1.56	1.96	1.75	1.92
50	1.29	1.56	1.23	1.83
100	0.93	1.23	0.66	1.35
150	0.61	0.91	0.38	1.00
200	-	0.60	-	0.59