Electronic Supplementary Material (ESI) for RSC Advances.

Table S.1 - Characteristics of the copper materials tested for biofilm control, leaching and corrosion. This information was provided by the suppliers

Alloy designation	Cu (%)	Other elements (%)	Toughness HB (250/5/30)	Breaking stress – Rm (MPa)	Yield stress Rp 0.2% (MPa)	Stretching (%)	Supplier
C11000	99.9	-	89	280	240	6	Universal AFIR, Porto, Portugal
C18000	96.17	Cr – 0.27 Ni – 2.87 Si – 0.69	212	n.a.	n.a.	n.a.	Universal AFIR, Porto, Portugal
C90800	87.13	Sn – 11.84 Zn- 0.03 PB – 0.62 P – 0.32 Al, Mn, Si, As, S, Ni < 0.01 Fe – 0.03 Sb – 0.02	121.0	350	196	7	Novacimnor, Porto, Portugal
C95500	79.58	Al – 9.49 Fe – 4.71 Mn – 1.06 Ni – 4.77 Pb – 0.03 Sn – 0.02 Zn – 0.34	177	n.a.	n.a.	n.a.	Universal AFIR, Porto, Portugal
C19638	57.5	Fe – 0.2 Ni – 0.1	485	n.a.	n.a.	15	Universal AFIR, Porto, Portugal

n.a. – this information is not available in data provided by the supplier

Table S.2. - Surface energy parameters (Lifshitz-van der Waals component- γ^{LW}; electron acceptor component – γ^{+} and electron donor component – γ^{-}) and hydrophobicity ΔG_{iwi} for the different materials tested. The surface characterization of each material was performed by the sessile drop contact angle measurement, according to Lemos et al.*

Material/ Copper content	**Surface energy parameters (mJ m^{-2})**				**ΔG_{iwi} (mJ m^{-2})**
	γ^{LW}	**γ^{AB}**	**γ^{+}**	**γ^{-}**	
0%	35.862	0	0	11.91	-35.77
57%	35.97	0	0	15.4	-26.27
79%	32.49	0	0	60	52.35
87%	32	2.67	0.042	42.71	26.83
96%	35.07	0	0	26.62	-0.92
100%	37.42	0	0	10.03	-42.24

* Lemos , M., Gomes, I., Mergulhão, F., Melo, L. and Simões, M. 2015. The effects of surface type on the removal of *Bacillus cereus* and *Pseudomonas fluorescens* single and dual species biofilms. Food and Bioproducts Processing 93, 234-241