Title (1)	:	**Effect of electrophoretic deposition kinetic behavior on dielectric property of epoxy coatings under different n-methylethanolamine's volumes**
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UniKL Author	:	Kelly Tau Len Yong
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Abstract	:	This study investigates the influence of the electrophoretic deposition current–time profile on the dielectric properties of diglycidyl ether of bisphenol A (DGEBA) epoxy coatings applied via electrophoretic deposition (EPD) under varying volumes of N-methylethanolamine (MEA). Three cationic DGEBA suspensions were synthesised by mixing commercially available DGEBA with different volumes of MEA (0.5, 1.0, and 1.5 ml) as the cationisation agent. The EPD processes using these suspensions were monitored by recording the electric current versus deposition time profiles. After curing, the deposited coatings were characterised using electrochemical impedance spectroscopy, field-emission scanning electron microscopy, and energy-dispersive X-ray spectroscopy analysis. The results demonstrate that varying MEA volumes lead to distinct electric deposition current–time profiles, subsequently affecting the coating thickness and dielectric properties. The smooth exponential decay of the electric deposition current–time profile observed during EPD with the 0.5 ml MEA suspension resulted in a high coating thickness and enhanced dielectric properties. Understanding the impact of the electric deposition current–time profile on epoxy coatings deposited via EPD offers an initial quality screening tool to identify poor-quality epoxy coatings with low dielectric properties Keywords: electrophoretic deposition, dielectric property, epoxy resin, functionalization, secondary amine.