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(54) Title: NEUTRAL LAYER AND HYDROPHOBIC PINNING MAT MATERIALS FOR USE IN DSA WITH IMPROVED SUB-
STRATE COMPATIBILITY

(57) Abstract: The invention relates to a random copolymer of structure (A) comprising, a carboxylic acid bearing repeat of structure (I), a 4-vinylbenzocyclobutene derived repeat unit of structure of structure (II), a styrenic repeat unit of structure (III), an alkyl acrylate or alkyl 2-methylenealkanoate derived repeat unit of structure (IV), a hydroxy functionalized alkyl acrylate or alkyl 2-methylenealkanoate derived repeat unit of structure (V), and two end groups as shown in structure (A) one of which is H and the other is a methyl moiety substituted with R_r, R_{r1} and R_{r2}, wherein R_{r1} is a C-1 to C-8 alkyl, R_{r2} is selected from a C-1 to C-8 alkyl, a C-1 to C-8 alkylene hydroxy moiety (-alkylene-OH), a C-1 -C-8 alkylencarboxylic acid moiety (-alkylene-CO₂H), or a benzylic alcohol comprising moiety of structure (B), R_r is a cyano moiety (-CN) or a carbonylalkyl moiety (-C(=O)-R_i), wherein R_i is a C-1 to C-8 alkyl or an aryl moiety.



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