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(54) Title: SEMICONDUCTING SHIELD COMPOSITIONS

(57) Abstract: A conducting polymer composite comprising: (i) a phase I material consisting essentially of a polymer copolymer of ethylene and an unsaturated ester having 4 to 20 carbon atoms, said copolymer having a crystallinity of 0 to about 30 percent as determined by differential scanning calorimetry analysis and having a melt viscosity η_1 ; (ii) a phase II material having a crystallinity of 0 to about 30 percent as determined by differential scanning calorimetry analysis and having a melt viscosity of η_{II} , said phase II material consisting essentially of (A) a non-polar copolymer of ethylene, an alpha-olefin having 3 to 12 carbon atoms, and, optionally, a diene, or (B) a non-polar elastomer, either of which, when mixed with phase I material, will not enter into a completely homogeneous state, but is compatible with the phase I material; and (iii) a conducting filler material dispersed in the phase I material and/or the phase II in an amount sufficient to be equal to or greater than the amount required to generate a continuous conducting network in the phase I and phase II materials, with the proviso that the phase I and phase II materials, in the molten state, have the following relationship: $(\eta_1 \div \eta_{II}) \times (V_{II} \div V_I) = 0.5$ to 2.0 wherein V_I and V_{II} are the volume fractions of the phase I and phase II materials, respectively, and $V_I + V_{II} = 1$.

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H01B1/24 H01B3/44 C08K3/04 C08L23/08

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H01B C08K C08L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data, INSPEC, IBM-TDB

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

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- *&* document member of the same patent family

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