Title (en)

CONDUCTIVE POLYMER COMPOSITIONS

Title (de)

LEITFÄHIGE POLYMERZUSAMMENSETZUNGEN

Title (fr)

COMPOSITIONS POLYMERES CONDUCTRICES

Publication

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Application

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Abstract (en)

[origin: WO9924991A1] A fluid conductive polymer mixture for use in the preparation of coatings, films and fibres is based on a polyaniline in base form (preferably emeraldine-base form). This is doped with a sulfonic acid having in addition to at least one sulfonic acid group a second hydrogen-bonding functional group and is dispersed in an acid solvent having a pKa less than 4.5 but substantially higher (more positive) than that of the sulfonic acid. The functional sulfonic acid appears to act as a solvating agent, as well as dopant, and allows the formation of high-solids mixtures in the acid solvents (up to around 15 % w/v compared with a maximum of about 10 % in conventional NMP-based mixtures) from which solvent can be extracted with a competing solvent (e.g. in a wet-spinning process); cold- (and hot-) drawable films and fibres can be obtained. Preferred sulfonic acid is 2-acrylamido-2-methyl-1-propanesulfonic acid (AMPSA) or its oligomer and preferred acid solvent dichloroacetic acid. The competing solvent may be acetone, methyl isobutyl ketone or butyl acetate.

IPC 1-7

H01B 1/12

IPC 8 full level

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