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(54) Title: REDISTRIBUTION OF POLYPHENYLENE ETHERS AND POLYPHENYLENE ETHERS WITH NOVEL STRUCTURE

(57) Abstract

The present invention deals with the distribution of polyphenylene ethers by reacting the polyphenylene ether in solution with a phenolic compound, wherein special phenolic compounds are used. The redistribution reaction can be performed in toluene or in toluene/alcohol blends. The reaction can be run in the presence or the absence of a catalyst. By using a process for the redistribution of polyphenylene ethers by reacting the polyphenylene ether in solution with a phenolic compound, wherein the polyphenylene ether is reacted with a phenolic compound with formula 3 wherein the phenolic rings are disubstituted with methyl groups or ethyl groups in the ortho positions and the group X is separated from the phenolic ring through at least two carbon atoms and the phenolic compound has a molecular weight of not more than 400 g/mol, preferably not more than 300 g/mol and the redistribution is performed in a mixture of toluene and methanol with 1–30 volume % of methanol or in toluene in the presence of a phase transfer catalyst such as tri(C8–C10 alkyl) methyl ammonium chloride as a promoter; and a diphenoquinone, preferably of 3,3',5,5'–tetramethyl–4,4'–diphenoquinone is used as a catalyst and the molar concentration of the phenolic compound is chosen between 0.9 to 1.1 times the molar quantity of monomeric units in the polyphenylene ether in the reaction solution, more than 90 % of the phenolic compound can be incorporated in the polyphenylene.