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(54) Title: PROCESS FOR THE PRODUCTION OF BISPHENOL-A

(57) Abstract: Bisphenol-A (BPA) is efficiently produced from phenol and acetone via countercurrent and multistage contact with a solid acid catalyst in the presence of an agent that enhances the removal of water of reaction from the reaction zone. A preferred contacting device is a distillation column wherein the catalyst is contained within a distillation mass transfer structure. A preferred water removal agent is a C₆ hydrocarbon, e.g., n-hexane. The column is configured with a reboiler, reflux condenser, and decanter as reflux drum. Phenol (in excess of the reaction stoichiometry) is fed to the column above the catalyst zone and acetone toward the bottom of the catalyst zone. Hexane is fed directly into the reboiler. Boilup is primarily hexane vapor which as it ascends the column removes water from the reaction zone in the vapor stream while the acetone is maintained within the reaction zone by dissolving in the descending phenol rich liquid stream. The water is removed from the system as decant liquid while the hexane is refluxed to the column. According to the invention nearly 100% conversion of the acetone is achieved and the phenol/BPA/hexane column bottoms product is free of water.



WO 2006/036244 A1