

ABSTRACT

The invention provides an efficient process for producing alkylated aromatic compounds such as cumene in a compact reactor.

5 The invention also provides a process for producing phenol which includes a step of producing cumene by the above process.

The process for producing alkylated aromatic compounds of the invention includes feeding raw materials including an aromatic compound and an alcohol in a gas-liquid downward
 10 concurrent flow mode to a fixed-bed reactor packed with a solid acid catalyst thereby to produce an alkylated aromatic compound, wherein the raw materials are fed to the reactor in a stream of a gas, and the reaction gas flow rate defined by the equation below is not less than 0.05 at an entrance of a solid acid
 15 catalyst layer:

$$p_g \cdot u_g \cdot [p_{air} \cdot p_{water} / (p_g \cdot p_l)]^{1/2} \text{ (kgm}^{-2}\text{s}^{-1}\text{)}.$$