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(54) Title: PROCESS FOR METHYL METHACRYLATE PRODUCTION

(57) Abstract: A process for the production of methyl methacrylate is disclosed, the method comprising: a) producing methacrolein from propionaldehyde and formaldehyde; and b) reacting the methacrolein in an oxidative esterification reaction to obtain methyl methacrylate. Reacting the methacrolein in an oxidative esterification reaction comprises introducing a reaction mixture comprising the methacrolein, methanol, and an oxygen-containing gas to a reactor system comprising a heterogeneous noble metal-containing catalyst. A liquid phase stream exiting the reactor system contains at least 30 wt% methanol based on the total weight of the liquid phase stream. The liquid phase stream exiting the reactor system contains less than 30 wt% methacrolein based on the total weight of the liquid phase stream. The liquid phase stream exiting the reactor system comprises greater than 0.1 ppm and less than 5000 ppm methyl isobutyrate. A gas phase stream exiting the reactor system comprises between 1 mol% and 7.5 mol% oxygen based on the total amount of the gas phase stream.



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