

A Process For Preparing Propylene Oxide

Abstract

- 5 A continuous process for the preparation of propylene oxide, comprising (i) providing a liquid feed stream comprising propene, hydrogen peroxide, acetonitrile, water, optionally propane, and at least one dissolved potassium salt of a phosphorus oxyacid wherein the molar ratio of potassium relative to phosphorus in the at least one potassium salt of a phosphorus oxyacid is in the range of from 0.6 to 1.4; (ii) passing the liquid feed stream provided in (i) into an
- 10 epoxidation reactor comprising a catalyst comprising a titanium zeolite of structure type MWW comprising zinc, and subjecting the liquid feed stream to epoxidation reaction conditions in the epoxidation reactor, obtaining a reaction mixture comprising propylene oxide, acetonitrile, water, the at least one dissolved potassium salt of a phosphorus oxyacid, optionally propene, and optionally propane; (iii) removing an effluent stream from the
- 15 epoxidation reactor, the effluent stream comprising propylene oxide, acetonitrile, water, at least a portion of the at least one dissolved potassium salt of a phosphorus oxyacid, optionally propene, and optionally propane.

(No suitable figure)