

EPOXIDATION REACTIONS AND OPERATING CONDITIONS THEREOF

Abstract

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A method of producing an alkylene oxide includes passing a reaction mixture comprising alkylene, oxygen and a gaseous chlorine-containing promoter species over a supported catalyst containing silver and a promoting amount of rhenium to undergo an epoxidation reaction at a first operating condition. The method
10 further includes subsequently performing the epoxidation reaction at a preferred operating condition. The preferred operating condition is characterized by an efficiency of the epoxidation reaction toward the alkylene oxide where the efficiency is lower than that of a maximum efficiency achievable at an operating temperature corresponding to the preferred operating condition.

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(Fig. 1)