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(54) Title: ALKYLENE OXIDE POLYMERIZATION USING ALUMINUM COMPOUNDS AND PHOSPHORUS-NITROGEN  
BASES

(57) Abstract: Polyethers are prepared by polymerizing an alkylene oxide in the presence of a starter, an aluminum compound that has at least one hydrocarbyl substituent, and a phosphorus-nitrogen base. The phosphorus-nitrogen base is present in only a small molar ratio relative to the amount of starter. The presence of such small amounts of phosphorus-nitrogen base greatly increases the catalytic activity of the system, compared to the case in which the aluminum compound is used by itself. The product polyethers have low amounts of unsaturated polyether impurities and little or no unwanted high molecular weight fraction. Polymers of propylene oxide have very low proportions of primary hydroxyl groups.



WO 2021/154783 A1