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(71) Applicant: **DOW GLOBAL TECHNOLOGIES LLC**
[US/US]; 2211 H. H. Dow Way, Midland, Michigan 48674
(US).

(72) Inventors: **BÉDARD, Anne-Catherine**; 633 Washington
Street, 1776 Building, Midland, Michigan 48667 (US). **BE-
LOWICH, Matthew E.**; 633 Washington Street, 1776
Building, Midland, Michigan 48667 (US). **ROSEN, Mari
S.**; 230 Abner Jackson Parkway, Lake Jackson, Texas 77566
(US). **CANDIA, Sandra Varinia Bernales**; 633 Wash-
ington Street, 1776 Building, Midland, Michigan 48667
(US). **BABB, David A.**; 202 Live Oak Lane, Lake Jackson,
Texas 77566 (US). **CUMMINS, Clark H.**; 633 Washing-
ton Street, 1776 Building, Midland, Michigan 48667 (US).
KEATON, Richard J.; 203 Abner Jackson Parkway, Lake
Jackson, Texas 77566 (US). **YONKEY, Matthew M.**; 633
Washington St., 1776 Building, Midland, Michigan 48667
(US).

(74) Agent: **COHN, Gary C.**; Gary C Cohn PLLC, 135 Beacons-
field Road, #2, Brookline, Massachusetts 02445 (US).

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(54) Title: ALKYLENE OXIDE POLYMERIZATION USING ALUMINUM COMPOUNDS AND CYCLIC AMIDINES

(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 cyclic amidine. 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 cyclic amidine 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.