



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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| <p>(21) International Application Number: PCT/EP97/05638</p> <p>(22) International Filing Date: 14 October 1997 (14.10.97)</p> <p>(30) Priority Data:<br/>08/731,495      16 October 1996 (16.10.96)      US</p> <p>(71) Applicant (for all designated States except MN): ARCO CHEMICAL TECHNOLOGY, L.P. [US/US]; Two Greenville Crossing, Suite 238, 4001 Kennett Pike, Greenville, DE 19807 (US).</p> <p>(71) Applicant (for MN only): ARCO CHEMIE TECHNOLOGIE NEDERLAND B.V. [NL/NL]; Theemsweg 14, NL-3197 KM Botlek (NL).</p> <p>(72) Inventor: LE-KHAC, Bi; 1210 Birmingham Road, West Chester, PA 19382 (US).</p> <p>(74) Agent: CROPP, John, Anthony, David; Mathys &amp; Squire, 100 Gray's Inn Road, London WC1X 8AL (GB).</p> | <p>(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).</p> <p><b>Published</b><br/><i>With international search report.<br/>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i></p> |                                                                                                                     |
| <p>(54) Title: DOUBLE METAL CYANIDE CATALYSTS CONTAINING FUNCTIONALIZED POLYMERS</p> <p>(57) Abstract</p> <p>Double metal cyanide (DMC) catalysts useful for epoxide polymerizations are disclosed. The catalysts comprise a DMC compound, an organic complexing agent, and from about 2 to about 80 wt.% of a functionalized polymer or a water-soluble salt derived from the polymer. The catalysts are easy to prepare and isolate, are substantially non-crystalline, and have high activity for polymerizing epoxides. Polyols made from the catalysts have exceptionally low unsaturations, low viscosities, and reduced levels of high molecular weight polyol tail.</p>                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                     |