

## ABSTRACT

### PROCESS FOR PRODUCTION OF POLYOLS WITH HYDROXIDE CONTAINING DOUBLE METAL CYANIDE (DMC) CATALYSTS

The present invention provides process for producing polyols using a crystalline, hydroxide containing double metal cyanide (DMC) catalyst of the formulae (I) or (II),



wherein  $M^1$  represents a metal selected from  $Zn^{+2}$ ,  $Fe^{+2}$ ,  $Ni^{+2}$ ,  $Mn^{+2}$ ,  $Co^{+2}$ ,  $Sn^{+2}$ ,  $Pb^{+2}$ ,  $Fe^{+3}$ ,  $Mo^{+4}$ ,  $Mo^{+6}$ ,  $Al^{+3}$ ,  $V^{+4}$ ,  $V^{+5}$ ,  $Sr^{+2}$ ,  $W^{+4}$ ,  $W^{+6}$ ,  $Cu^{+2}$  and  $Cr^{+3}$ ,  $M^2$  represents a metal selected from  $Fe^{+2}$ ,  $Fe^{+3}$ ,  $Co^{+2}$ ,  $Co^{+3}$ ,  $Cr^{+2}$ ,  $Cr^{+3}$ ,  $Mn^{+2}$ ,  $Mn^{+3}$ ,  $Ir^{+3}$ ,  $Ni^{+2}$ ,  $Rh^{+3}$ ,  $Ru^{+2}$ ,  $V^{+4}$  and  $V^{+5}$ ,  $L$  represents an organic ligand and  $x$ ,  $y$  and  $q$  are chosen to maintain electroneutrality. The polyols of the present invention may find use in the preparation of polyurethanes.