

## ABSTRACT

### **METHOD FOR PRODUCING POLYETHER CARBONATE POLYOLS**

The invention relates to a method for producing polyether carbonate polyols by adding alkylene oxides and carbon dioxide to an H-functional starter substance in the presence of a double metal cyanide (DMC) catalyst or in the presence of a metal complex catalyst based on the metals zinc and/or cobalt, wherein (γ) alkylene oxide and carbon dioxide are added to an H-functional starter substance in a reactor with a total pressure (absolute) of 5 to 120 bar in the presence of a double metal cyanide catalyst or in the presence of a metal complex catalyst based on the metals zinc and/or cobalt, and a reaction mixture containing the polyether carbonate polyol is obtained, (δ) the reaction mixture obtained in step (γ) remains in the reactor or is optionally continuously transferred to a downstream reactor at a starting total pressure (absolute) of 5 to 120 bar, the content of free alkylene oxide in the reaction mixture being reduced in the course of a downstream reaction in each case, and the total pressure (absolute) can be reduced by up to 50% during the step (δ), and (ζ) the content of highly volatile components of the obtained reaction mixture is thermally reduced at a temperature of 80 °C to 200 °C. The invention is characterized in that (ε) the reaction mixture resulting from step (δ) is brought to a total pressure (absolute) of  $\leq 2.0$  bar, preferably 0.5 bar to 2.0 bar, particularly preferably 0.9 bar to 1.1 bar, prior to step (ζ) and then left at a temperature of 80 to 180 °C for a dwell time of at least 0.5 h. After the dwell time has expired, 5 to 100 ppm of component K is added to the resulting mixture, component K being selected from at least one compound which contains a phosphorus-oxygen-hydrogen group.