

Title (en)  
PROCESS FOR PRODUCING POLYETHER CARBONATE POLYOLS

Title (de)  
VERFAHREN ZUR HERSTELLUNG VON POLYETHERCARBONATPOLYOLEN

Title (fr)  
PROCÉDÉ DE PRODUCTION DE POLYÉTHERCARBONATE POLYOLS

Publication  
**EP 4069763 A1 20221012 (DE)**

Application  
**EP 20812059 A 20201130**

Priority

- EP 19213511 A 20191204
- EP 2020083919 W 20201130

Abstract (en)  
[origin: WO2021110589A1] The present invention relates to a process for continuous production of polyether carbonate polyols by the addition of alkylene oxide and carbon dioxide in the presence of a DMC catalyst or a metal complex catalyst based on the metals cobalt and/or zinc, onto an H-functional starter substance, wherein (a) optionally a sub-quantity of the H-functional starter substance and/or a suspension medium comprising no H-functional groups are initially introduced into a reactor optionally together with the DMC catalyst or a metal complex catalyst based on the metals zinc and/or cobalt, (B) optionally, in order to activate the DMC catalyst, a sub-quantity (with respect to the total quantity of the quantity of alkylene oxide used for activation and copolymerization) of alkylene oxide is added to the mixture resulting from step (a), wherein this addition of a sub-quantity of alkylene oxide can optionally be carried out in the presence of CO<sub>2</sub> and wherein the temperature peak occurring on account of the subsequent exothermic chemical reaction (hotspot) and/or a pressure drop in the reactor is then awaited in each case and wherein the activation step (B) can also be carried out multiple times, (γ) the H-functional starter substance, alkylene oxide and catalyst are continuously metered into the reaction during the addition and the resulting reaction mixture is continuously discharged from the reactor, characterized in that (i) before step (γ) and after the optional steps (a) and/or (B) a suspension of catalyst in suspension medium and/or H-functional starter substance in the reactor is adjusted to a temperature T<sub>1</sub> ranging from 100°C to 150°C, wherein T<sub>1</sub> is at least 10% above a temperature T<sub>2</sub> and T<sub>2</sub> is a temperature ranging from 50°C to 135°C, (ii) from commencement of the addition of alkylene oxide in step (γ) the temperature in the reactor T<sub>1</sub> adjusted in (i) is continuously reduced to the temperature T<sub>2</sub> and the temperature T<sub>2</sub> is reached after 50 minutes at the earliest.

IPC 8 full level  
**C08G 65/26** (2006.01); **C08G 64/34** (2006.01)

CPC (source: EP US)  
**C08G 64/0208** (2013.01 - US); **C08G 64/34** (2013.01 - EP US); **C08G 65/2609** (2013.01 - EP); **C08G 65/2615** (2013.01 - EP); **C08G 65/2663** (2013.01 - EP); **C08G 65/2696** (2013.01 - EP)

Citation (search report)  
See references of WO 2021110589A1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**EP 3831867 A1 20210609**; CN 114729115 A 20220708; EP 4069763 A1 20221012; US 2022411578 A1 20221229; WO 2021110589 A1 20210610

DOCDB simple family (application)  
**EP 19213511 A 20191204**; CN 202080083462 A 20201130; EP 2020083919 W 20201130; EP 20812059 A 20201130; US 202017770903 A 20201130