

Title (en)

SEMI-CONTINUOUS SUSPENSION POLYMERIZATION OF POLYACRYLATES IN A CAPILLARY REACTOR

Title (de)

SEMI-KONTINUIERLICHE SUSPENSIONS POLYMERISATION VON POLYACRYLATEN IM KAPILLARREAKTOR

Title (fr)

POLYMÉRISATION EN SUSPENSION SEMI-CONTINUE DE POLYACRYLATES DANS UN RÉACTEUR CAPILLAIRE

Publication

**EP 4351776 A1 20240417 (DE)**

Application

**EP 22731577 A 20220601**

Priority

- EP 21178671 A 20210610
- EP 2022064844 W 20220601

Abstract (en)

[origin: CA3221326A1] The invention relates to a process for producing polyacrylate particles by way of suspension polymerization and subsequent agglomeration. It was based on the problem of specifying a process for producing polyacrylate particles having defined shape and size, which enables improved heat management and requires a minimum amount of organic substances. Mechanical operating steps for establishing the shape and size of the particles ? especially grinding and sieving ? are to be avoided in order to produce a minimum amount of undersize. Finally, it is to be possible to implement the process economically on an industrial scale. An essential aspect of the process of the invention is that the steps of polymerization and agglomeration are conducted in separate apparatuses, namely suspension polymerization in a continuously operated capillary reactor and agglomeration in a batchwise reactor. The use of microstructured apparatuses is a further significant aspect of the invention.

IPC 8 full level

**B01J 19/00** (2006.01); **B01J 19/18** (2006.01); **C08F 2/00** (2006.01); **C08F 2/01** (2006.01); **C08F 2/18** (2006.01); **C08F 2/30** (2006.01);  
**C08F 2/32** (2006.01); **C08F 4/30** (2006.01); **C08F 120/06** (2006.01)

CPC (source: EP KR US)

**B01J 19/0093** (2013.01 - EP KR US); **B01J 19/18** (2013.01 - EP); **C08F 2/001** (2013.01 - EP KR US); **C08F 2/01** (2013.01 - EP KR US);  
**C08F 2/18** (2013.01 - EP KR US); **C08F 2/24** (2013.01 - US); **C08F 2/30** (2013.01 - EP KR); **C08F 2/32** (2013.01 - EP KR);  
**C08F 4/30** (2013.01 - EP KR); **C08F 6/22** (2013.01 - US); **C08F 120/06** (2013.01 - EP); **C08F 220/06** (2013.01 - KR US);  
**C08F 222/385** (2013.01 - KR); **B01J 2219/00792** (2013.01 - EP KR US); **B01J 2219/00822** (2013.01 - EP KR);  
**B01J 2219/0086** (2013.01 - EP KR US); **B01J 2219/00873** (2013.01 - EP KR US); **B01J 2219/00889** (2013.01 - EP US);  
**B01J 2219/00898** (2013.01 - EP KR)

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

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

**EP 4101530 A1 20221214**; BR 112023025611 A2 20240227; CA 3221326 A1 20221215; CN 117460575 A 20240126; EP 4351776 A1 20240417;  
JP 2024521442 A 20240531; KR 20240021852 A 20240219; MX 2023014295 A 20240118; US 2024262938 A1 20240808;  
WO 2022258445 A1 20221215

DOCDB simple family (application)

**EP 21178671 A 20210610**; BR 112023025611 A 20220601; CA 3221326 A 20220601; CN 202280040805 A 20220601;  
EP 2022064844 W 20220601; EP 22731577 A 20220601; JP 2023576023 A 20220601; KR 20247000466 A 20220601;  
MX 2023014295 A 20220601; US 202218567296 A 20220601