

Title (en)

METHOD FOR PRODUCING A SINGLE-SERVE CAPSULE, AND SINGLE-SERVE CAPSULE

Title (de)

VERFAHREN ZUR HERSTELLUNG EINER PORTIONENKAPSEL, UND PORTIONENKAPSEL

Title (fr)

PROCÉDÉ DE PRODUCTION D'UNE CAPSULE À USAGE UNIQUE, ET CAPSULE À USAGE UNIQUE

Publication

EP 4146549 A1 20230315 (DE)

Application

EP 21724630 A 20210506

Priority

- EP 20173756 A 20200508
- EP 2021062065 W 20210506

Abstract (en)

[origin: WO2021224421A1] The invention relates to a method for producing a capsule, comprising the following steps: providing a main body (2) consisting of a plastic and having a bottom region (5), a circumferential side wall (6) and a circumferential main body collar (41) adjoining the circumferential side wall; providing a lid (3) consisting of a plastic; filling the main body (2) with an extract material; placing the lid (3) onto the main body (2) such that a fastening part of the lid rests on the main body collar (41); and fastening the lid collar to the main body collar by ultrasonic welding. When the lid collar is fastened, an inner surface (33) of the fastening part lies flat on a collar surface (43) of the main body collar. A sonotrode (50) to which mechanical vibrations are applied and which has an energy director (52) is pressed against an outer surface (34) of the fastening part or the main body collar such that plastic material of the lid and of the main body collar begins to liquefy at the outer surface as a result of the effect of the mechanical vibrations.

IPC 8 full level

B65B 51/22 (2006.01); **B29C 65/00** (2006.01); **B29C 65/08** (2006.01); **B29L 31/00** (2006.01); **B65B 29/02** (2006.01)

CPC (source: EP US)

B29C 65/08 (2013.01 - EP US); **B29C 66/1312** (2013.01 - EP US); **B29C 66/24244** (2013.01 - EP US); **B29C 66/24245** (2013.01 - EP); **B29C 66/30223** (2013.01 - US); **B29C 66/542** (2013.01 - EP); **B29C 66/71** (2013.01 - EP US); **B29C 66/7234** (2013.01 - EP US); **B29C 66/73791** (2013.01 - EP US); **B29C 66/81427** (2013.01 - EP US); **B29C 66/8322** (2013.01 - EP US); **B65B 29/022** (2017.07 - EP US); **B65B 51/225** (2013.01 - EP US); **B29C 66/30223** (2013.01 - EP); **B29L 2031/7174** (2013.01 - EP US); **Y02W 90/10** (2015.05 - EP)

C-Set (source: EP)

1. **B29C 66/71** + **B29K 2023/12**
2. **B29C 66/71** + **B29K 2067/006**
3. **B29C 66/71** + **B29K 2067/046**
4. **B29C 66/71** + **B29K 2029/04**

Citation (search report)

See references of WO 2021224421A1

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 3907145 A1 20211110; AU 2021267002 A1 20221215; BR 112022022653 A2 20221213; CN 115515857 A 20221223; EP 4146549 A1 20230315; JP 2023524828 A 20230613; KR 20230037010 A 20230315; US 2024116663 A1 20240411; WO 2021224421 A1 20211111; ZA 202212348 B 20240424

DOCDB simple family (application)

EP 20173756 A 20200508; AU 2021267002 A 20210506; BR 112022022653 A 20210506; CN 202180033798 A 20210506; EP 2021062065 W 20210506; EP 21724630 A 20210506; JP 2022567685 A 20210506; KR 20227042546 A 20210506; US 202117922879 A 20210506; ZA 202212348 A 20221111