

Title (en)

Multi-compartment tray-less package with a rigid frame

Title (de)

Verpackung mit mehreren Fächern ohne Ablage mit starrem Rahmen

Title (fr)

Emballage sans plateau à plusieurs compartiments avec un cadre rigide

Publication

EP 2765092 A1 20140813 (EN)

Application

EP 13154221 A 20130206

Priority

EP 13154221 A 20130206

Abstract (en)

A tray-less multi-compartment plastic flexible package, preferably used for food or medical packaging applications, and methods for its manufacture are described. The present package does not require a supplemental tray being sufficiently rigid as such, thanks to the partial crystallization of crystallizable films along a frame in correspondence of the sealing area. The absence of a tray makes the present packages particularly "green" resulting in a significant reduction of plastic material as well as of manufacturing and disposal costs.

IPC 8 full level

B65D 81/32 (2006.01); **B65D 75/30** (2006.01)

CPC (source: EP US)

B65B 11/50 (2013.01 - EP US); **B65B 25/068** (2013.01 - EP US); **B65D 79/00** (2013.01 - US); **B65D 81/3272** (2013.01 - EP US); **B65B 2230/02** (2013.01 - EP US); **B65D 65/466** (2013.01 - EP US); **B65D 75/30** (2013.01 - EP US); **B65D 81/2023** (2013.01 - EP US); **B65D 81/2084** (2013.01 - EP US)

Citation (applicant)

- US 4069348 A 19780117 - BUSH ROBERT G
- WO 8702965 A1 19870521 - GARWOOD LTD [AU]
- WO 8800907 A1 19880211 - GARWOOD LTD [AU]
- DE 4440727 A1 19960523 - BEIERSDORF AG [DE]
- EP 0021648 A1 19810107 - ICI PLC [GB]
- US 3761450 A 19730925 - HERWIG W, et al
- US 5356972 A 19941018 - SPERLING LESLIE H [US], et al
- WO 9619333 A1 19960627 - ICI PLC [GB], et al
- WO 0154886 A1 20010802 - DU PONT [US]
- WO 2011083342 A2 20110714 - LINPAC PACKAGING LTD [GB], et al
- US 4841605 A 19890627 - SCHUIERER MANFRED [DE]
- US 5494619 A 19960227 - ZARETSKY MARK C [US], et al
- WO 2005021638 A2 20050310 - DOW GLOBAL TECHNOLOGIES INC [US], et al
- WO 2009055275 A2 20090430 - DOW GLOBAL TECHNOLOGIES INC [US], et al
- B. WUNDERLICH: "Thermal Analysis", 1990, ACADEMIC PRESS, pages: 417 - 431
- D. GARCIA: "J. of Polymer Science - Polymer physics edition", vol. 22, 1984, article "Heterogeneous nucleation of PET", pages: 2063 - 2072
- R. LEGRAS; C. BAILLY; M. DAUMERIE; V. ZICHY: "Chemical nucleation, a new concept applied to mechanism of action of organic acid salts on the crystallization of PET and bisphenol-A-polycarbonate", POLYMER, vol. 25, 1984, pages 835 - 844
- J. OF APPLIED POLYMER SCIENCE, vol. 36, 1988, pages 387 - 402

Citation (search report)

- [A] EP 1291294 A1 20030312 - BEL FROMAGERIES [FR]
- [A] GB 1361868 A 19740730 - MAYER & CO INC O
- [A] EP 0368240 A1 19900516 - NAKAMURA KENJI
- [A] WO 2004113096 A2 20041229 - CHIRNOMAS MUNROE [US]
- [A] WO 9826997 A2 19980625 - BOOTS CO PLC [GB], et al

Cited by

US11319418B2

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 2765092 A1 20140813; **EP 2765092 B1 20150902**; AU 2014200194 A1 20140821; AU 2014200194 B2 20161222; ES 2554997 T3 20151228; NZ 617719 A 20150227; US 2014216975 A1 20140807

DOCDB simple family (application)

EP 13154221 A 20130206; AU 2014200194 A 20140113; ES 13154221 T 20130206; NZ 61771913 A 20131113; US 201414171105 A 20140203