

Title (en)  
Cartridge with ventilating piston

Title (de)  
Kartusche mit entlüftbarem Kolben

Title (fr)  
Cartouche à piston évacuant

Publication  
**EP 1514812 A1 20050316 (DE)**

Application  
**EP 04020347 A 20040827**

Priority  
DE 10342091 A 20030910

Abstract (en)  
The cartridge, to be filled with a paste material, has a cylindrical body (1) and a two-part piston with air relief. The piston section (2) which is tightly against the inner wall of the cartridge has an air escape channel (5), and the piston head section (3) against the paste material filling (6) has a convex curvature with air vent opening(s) which can be closed, to allow air to pass through into the escape when the cartridge is being filled until it is full, when the paste covers the outlet opening(s).

Abstract (de)  
Eine Kartusche zur Aufnahme pastösen Materials mit einem zylindrischen Kartuschenhohlkörper und einem entlüftbaren Kolben weist einen zweiteiligen Kolben aus Kolbenteil (2) und Deckelteil (3) auf, bei dem nach der Entlüftung das Deckelteil den Entlüftungsweg (4,5) permanent verschließt. <IMAGE>

IPC 1-7  
**B65D 83/00**; **B05C 17/005**

IPC 8 full level  
**B05C 17/005** (2006.01); **B65D 83/00** (2006.01)

CPC (source: EP US)  
**B05C 17/00576** (2013.01 - EP US); **B05C 17/00579** (2013.01 - EP US); **B65D 83/0005** (2013.01 - EP US); **B65D 2205/04** (2013.01 - EP US)

Citation (search report)

- [XA] WO 9528337 A1 19951026 - ADLOCK PACKAGING LTD [GB], et al
- [XA] EP 1308218 A2 20030507 - SULZER CHEMTECH AG [CH]
- [XA] US 6598766 B1 20030729 - BRUGNER NIKOLAUS [DE]
- [XD] EP 0463991 A1 19920102 - KELLER WILHELM A [CH]
- [XA] EP 0081145 A1 19830615 - FISCHBACH A KUNSTSTOFF KG [DE]

Cited by  
DE102008000841A1; EP1908703A1; EP1738834A1; DE102008000841B4; EP3189901A1; CN108463290A; RU2728373C2; EP3199245A1; FR3047186A1; US10427181B2; WO2017121706A1; US7621428B2; US7909211B2; US8678246B2

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)  
**EP 1514812 A1 20050316**; DE 10342091 A1 20050428; JP 2005082246 A 20050331; US 2005066809 A1 20050331

DOCDB simple family (application)  
**EP 04020347 A 20040827**; DE 10342091 A 20030910; JP 2004253006 A 20040831; US 93248504 A 20040902