

Title (en)

POLYMERIC ARTICLES COMPRISING BLENDS OF PBAT, PEA AND A CARBOHYDRATE-BASED POLYMERIC MATERIAL

Title (de)

POLYMERARTIKEL MIT MISCHUNGEN AUS PBAT, PEA UND EINEM POLYMEREN MATERIAL AUF KOHLENHYDRATBASIS

Title (fr)

ARTICLES POLYMÈRES COMPRENANT DES MÉLANGES DE PBAT, DE PEA ET D'UN MATÉRIAU POLYMÈRE À BASE D'HYDRATE DE CARBONE

Publication

EP 3997171 A4 20230726 (EN)

Application

EP 20837209 A 20200710

Priority

- US 201962875872 P 20190718
- US 201962872589 P 20190710
- US 2020041643 W 20200710

Abstract (en)

[origin: WO2021007534A1] Composite blends of PBAT (or another similar polyester) with PLA and a carbohydrate-based polymeric material. While PLA is not compostable under home composting conditions (e.g., temperature of 28°C) on its own, when blended in the manner described herein, it is compostable under such conditions. The addition of the PLA increases the rigidity of the composite blend, as PBAT on its own is so flexible as to be problematic for use in carryout bags, and the like. An exemplary blend may include 30-55% by weight of the carbohydrate-based polymeric material, up to 20%, or up to 15% by weight of PLA, with the balance of polymeric content being PBAT (e.g., 30-60% PBAT). Other components (e.g., an inorganic filler, such as calcium carbonate) may also be included in the blend.

IPC 8 full level

C08L 23/06 (2006.01); **C08J 5/18** (2006.01); **C08K 3/26** (2006.01); **C08K 5/00** (2006.01); **C08L 3/02** (2006.01); **C08L 67/02** (2006.01)

CPC (source: EP KR)

C08J 5/18 (2013.01 - EP); **C08K 3/26** (2013.01 - KR); **C08K 5/0016** (2013.01 - KR); **C08L 3/02** (2013.01 - KR); **C08L 67/02** (2013.01 - EP KR); **C08L 67/04** (2013.01 - KR); **C08J 2300/16** (2013.01 - EP); **C08J 2367/02** (2013.01 - EP); **C08J 2403/00** (2013.01 - EP); **C08J 2467/04** (2013.01 - EP); **C08K 2003/265** (2013.01 - EP KR); **C08L 2201/06** (2013.01 - KR); **Y02W 90/10** (2015.05 - EP)

Citation (search report)

- [X] US 2009324917 A1 20091231 - WANG JAMES H [US], et al
- [XA] US 2012283364 A1 20121108 - SARAZIN PIERRE [CA], et al
- [XA] WO 2011054896 A1 20110512 - NOVAMONT SPA [IT], et al
- [XA] REN J ET AL: "Preparation, characterization and properties of binary and ternary blends with thermoplastic starch, poly(lactic acid) and poly(butylene adipate-co-terephthalate)", CARBOHYDRATE POLYMERS, APPLIED SCIENCE PUBLISHERS, LTD BARKING, GB, vol. 77, no. 3, 11 July 2009 (2009-07-11), pages 576 - 582, XP026119306, ISSN: 0144-8617, [retrieved on 20090206], DOI: 10.1016/J.CARBPOL.2009.01.024
- See references of WO 2021007534A1

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