

Title (en)

ADDITION OF BIODEGRADABILITY LENDING ADDITIVES TO PLASTIC MATERIALS

Title (de)

ZUSATZ VON BIOLOGISCHE ABBAUBARKEIT VERLEIHENDEN ADDITIVEN ZU KUNSTSTOFFEN

Title (fr)

AJOUT D'ADDITIFS CONFÉRANT UNE BIODÉGRADABILITÉ À DES MATIÈRES PLASTIQUES

Publication

EP 3784732 A4 20220119 (EN)

Application

EP 19793589 A 20190423

Priority

- US 201862661387 P 20180423
- US 2019028733 W 20190423

Abstract (en)

[origin: WO2019209834A1] Described herein are methods for rendering biodegradable a plastic material that is not itself biodegradable, by blending the plastic material with a carbohydrate-based polymeric material that is formed from a) one or more starches and a plasticizer (e.g., glycerin), b) an additive known in the art as an OXO material and/or an additive that interacts with microbes that contribute to biodegradation of the non-biodegradable material. The carbohydrate-based polymeric material is less crystalline than the non-biodegradable materials, e.g., being substantially amorphous, and having a crystallinity of no more than 20%. When tested under conditions causing biodegradation, the blend biodegrades to an extent greater than the content of the carbohydrate-based polymer.

IPC 8 full level

C08L 23/06 (2006.01); **C08L 83/04** (2006.01)

CPC (source: EP KR)

C08K 3/012 (2018.01 - KR); **C08K 3/10** (2013.01 - KR); **C08K 5/0033** (2013.01 - KR); **C08K 5/1545** (2013.01 - KR); **C08K 5/16** (2013.01 - KR); **C08L 23/06** (2013.01 - EP); **C08L 83/04** (2013.01 - EP); **C08L 101/00** (2013.01 - KR); **C09D 183/04** (2013.01 - EP); **C09J 183/04** (2013.01 - EP); **C08L 2201/06** (2013.01 - EP)

C-Set (source: EP)

1. **C08L 23/06** + **C08L 51/06** + **C08K 3/012**
2. **C08L 23/06** + **C08L 5/00**
3. **C08L 83/04** + **C08L 75/00**
4. **C08L 23/06** + **C08L 51/06** + **C08L 3/02** + **C08K 3/012**

Citation (search report)

- [X] US 2010115836 A1 20100513 - JULIAN BRANDON J [US]
- [X] WO 2016198652 A1 20161215 - CARBIOS [FR]
- [XP] WO 2019043134 A1 20190307 - CARBIOLICE [FR]
- [A] US 2017362418 A1 20171221 - LAPRAY BRADFORD [US], et al
- See also references of WO 2019209834A1

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

DOCDB simple family (publication)

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DOCDB simple family (application)

US 2019028733 W 20190423; BR 112020021530 A 20190423; CN 201980042207 A 20190423; EP 19793589 A 20190423; JP 2020558940 A 20190423; KR 20207033615 A 20190423