

## 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)

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## DOCDB simple family (application)

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