

## Title (en)

BIOPOLYMERS ISOLATED FROM RESIDUAL BIOMASS AND FOSSIL SOURCE; PRODUCTION PROCESSES AND PRODUCT USE

## Title (de)

VON EINER RESTBIOMASSE UND EINER FOSSILEN QUELLE ISOLIERTE BIOPOLYMERE; HERSTELLUNGSVERFAHREN DAFÜR UND VERWENDUNG DES PRODUKTS DARAUS

## Title (fr)

BIOPOLYMÈRES ISOLÉS À PARTIR D'UNE BIOMASSE RÉSIDUELLE ET D'UNE SOURCE FOSSILE ; PROCÉDÉS DE PRODUCTION ET UTILISATION DU PRODUIT

## Publication

**EP 2793608 A1 20141029 (EN)**

## Application

**EP 12824749 A 20121221**

## Priority

- IT TO20111192 A 20111222
- IT 2012000399 W 20121221

## Abstract (en)

[origin: WO2013093951A1] Composition, and processes for the production and use of mixture of water soluble biopolymers, said mixture comprising an organic fraction and a mineral fraction, the organic fraction comprising polymer molecules having a molecular weight included between 5 and 500 kDalton and a polydispersion index included between 6 and 53, wherein the organic fraction contains, in % weight of dry substance,  $37 \leq C \leq 65$ ;  $3 < N \leq 7$ , and N and C mean nitrogen and organic carbon being distributed among the following types of carbon atoms and functional groups with the following composition expressed as molar fraction of the total organic carbon:  $0.3 < Cal \leq 0.6$ ;  $CN \leq 0.1$ ;  $OMe \leq 0.1$ ;  $0.3 \leq OR \leq 0.6$ ;  $0.02 \leq OCO \leq 0.08$ ;  $0.07 \leq Ph \leq 0.30$ ;  $0.02 \leq PhOH \leq 0.06$ ;  $PhOR/Ar \leq 0.09$ ;  $0.04 \leq COOH \leq 0.12$ ;  $CON \leq 0.12$ ;  $C=O \leq 0.05$ ; and the mineral fraction contains, in % weight of dry substance, ashes  $\leq 30$ ;  $Si \leq 3.0$ ;  $Fe \leq 0.9$ ;  $Al \leq 0.8$ ;  $Mg \leq 1.2$ ;  $Ca \leq 6.5$ ;  $K \leq 10$ ;  $Na \leq 10$ ;  $Cu \leq 0.03$ ;  $Ni \leq 0.01$ ;  $Zn \leq 0.05$ ;  $Cr \leq 0.003$ ;  $Pb \leq 0.01$ .

## IPC 8 full level

**A23K 1/00** (2006.01); **A01N 61/00** (2006.01); **B09B 3/00** (2006.01); **B09C 1/00** (2006.01); **C02F 1/56** (2006.01); **C05F 11/00** (2006.01); **C08H 7/00** (2011.01); **C08H 99/00** (2010.01); **C09J 201/00** (2006.01); **C12P 7/00** (2006.01)

## CPC (source: EP US)

**A23K 10/37** (2016.05 - EP); **A23K 20/10** (2016.05 - EP); **A23K 20/20** (2016.05 - EP US); **A23K 40/20** (2016.05 - US); **A23K 40/25** (2016.05 - US); **A23K 50/30** (2016.05 - EP); **B09C 1/00** (2013.01 - EP); **B09C 1/08** (2013.01 - EP); **C02F 1/56** (2013.01 - EP); **C05F 9/04** (2013.01 - EP); **C08H 1/00** (2013.01 - EP); **C08H 1/06** (2013.01 - EP); **C08H 8/00** (2013.01 - EP); **C08L 89/06** (2013.01 - EP); **C08L 101/16** (2013.01 - EP); **C02F 1/44** (2013.01 - EP); **C02F 1/442** (2013.01 - EP); **C02F 1/444** (2013.01 - EP); **C02F 2101/20** (2013.01 - EP); **Y02A 40/20** (2017.12 - EP); **Y02E 50/30** (2013.01 - EP); **Y02P 20/145** (2015.11 - EP); **Y02P 60/87** (2015.11 - EP); **Y02W 30/40** (2015.05 - EP)

## Citation (search report)

See references of WO 2013093951A1

## Citation (examination)

US 5262315 A 19931116 - GROSS BRIGITTE [FR], et al

## 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)

**WO 2013093951 A1 20130627**; EP 2793608 A1 20141029; IT TO20111192 A1 20130623

## DOCDB simple family (application)

**IT 2012000399 W 20121221**; EP 12824749 A 20121221; IT TO20111192 A 20111222