

Title (en)

POLYMER MIXTURE HAVING IMPROVED RHEOLOGICAL PROPERTIES AND IMPROVED SHRINKING BEHAVIOUR

Title (de)

POLYMERMISCHUNG MIT VERBESSERTEN RHEOLOGISCHEN EIGENSCHAFTEN SOWIE VERBESSERTEM SCHRUMPFVERHALTEN

Title (fr)

MELANGE POLYMERES PRESENTANT DES PROPRIETES RHEOLOGIOQUES AMELIOREES ET UNE MEILLEURE RETRACTILITE

Publication

**EP 1401957 A1 20040331 (DE)**

Application

**EP 02762285 A 20020614**

Priority

- DE 10129522 A 20010621
- EP 0206548 W 20020614

Abstract (en)

[origin: WO03000796A1] The invention relates to a thermoplastic polymer mixture containing m, m representing a natural number higher than 1, polymers P<sub>n</sub> wherein n represents a natural number between 1 and m, and at least one recurring functional group contained in the P<sub>n</sub> polymer chain, said group(s) having the structure -(R<1>)x-C(O)-(R<2>)y- wherein x and y independently represent 0 or 1, and x + y = 1, and R<1>, R<2> independently represent oxygen or nitrogen linked into the main polymer chain. The polymers P<sub>n</sub> differ in terms of at least one characteristic related to molecular weight. The polymer mixture has a number average molecular weight Mn(P)<sub>1</sub>, a weight average molecular weight Mw(P)<sub>1</sub>, a Z average molecular weight Mz(P)<sub>1</sub>, a heterogeneity index Mw(P)<sub>1</sub>/Mn(P)<sub>1</sub> and a molecular weight Mp(P)<sub>1</sub> defined according to DIN 55672-2 in hexafluoroisopropanol as an elution agent. After maintaining the polymer mixture at the melting point of the same, defined according to ISO 11357-1 and 11357-3, for five minutes, the polymer mixture has a number average molecular weight Mn(P)<sub>2</sub>, a weight average molecular weight Mw(P)<sub>2</sub>, a Z average molecular weight Mz(P)<sub>2</sub>, a heterogeneity index Mw(P)<sub>2</sub>/Mn(P)<sub>2</sub>, and a molecular weight Mp(P)<sub>2</sub> defined according to DIN 55672-2 in hexafluoroisopropanol as an elution agent. The values Mn(P)<sub>2</sub>, Mw(P)<sub>2</sub>, Mz(P)<sub>2</sub>, Mw(P)<sub>2</sub>/Mn(P)<sub>2</sub> and Mp(P)<sub>2</sub> lie within the triple replication standard deviation sigma (r) in relation to Mn(P)<sub>1</sub>, Mw(P)<sub>1</sub>, Mz(P)<sub>1</sub>, Mw(P)<sub>1</sub>/Mn(P)<sub>1</sub> and Mp(P)<sub>1</sub> according to DIN 55672-2 in hexafluoroisopropanol as an elution agent.

IPC 1-7

**C08L 67/02**; **C08L 77/00**; **C08L 101/12**

IPC 8 full level

**C08L 67/00** (2006.01); **C08L 67/02** (2006.01); **C08L 77/00** (2006.01); **C08L 77/02** (2006.01); **C08L 77/06** (2006.01); **C08L 77/12** (2006.01); **C08L 101/02** (2006.01)

CPC (source: EP KR US)

**C08L 67/02** (2013.01 - EP US); **C08L 77/00** (2013.01 - EP US); **C08L 77/02** (2013.01 - EP US); **C08L 77/06** (2013.01 - EP US); **C08L 77/10** (2013.01 - KR); **C08L 77/12** (2013.01 - EP US); **C08L 101/02** (2013.01 - EP US)

C-Set (source: EP US)

1. **C08L 67/02** + **C08L 2666/14**
2. **C08L 77/00** + **C08L 2666/14**
3. **C08L 77/02** + **C08L 2666/14**
4. **C08L 77/06** + **C08L 2666/14**
5. **C08L 77/12** + **C08L 2666/14**

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)

**WO 03000796 A1 20030103**; AR 034496 A1 20040225; BG 108522 A 20041230; BR 0210567 A 20040608; CA 2449895 A1 20030103; CN 1525995 A 20040901; CZ 20033514 A3 20040512; DE 10129522 A1 20030109; EP 1401957 A1 20040331; HU P0401480 A2 20041028; HU P0401480 A3 20060328; IL 159074 A0 20040512; JP 2004530771 A 20041007; KR 20040010760 A 20040131; MX PA03011232 A 20040226; PL 367818 A1 20050307; SK 15472003 A3 20040406; US 2004192855 A1 20040930; ZA 200400401 B 20050330

DOCDB simple family (application)

**EP 0206548 W 20020614**; AR P020102248 A 20020614; BG 10852204 A 20040112; BR 0210567 A 20020614; CA 2449895 A 20020614; CN 02812213 A 20020614; CZ 20033514 A 20020614; DE 10129522 A 20010621; EP 02762285 A 20020614; HU P0401480 A 20020614; IL 15907402 A 20020614; JP 2003507192 A 20020614; KR 20037016673 A 20031219; MX PA03011232 A 20020614; PL 36781802 A 20020614; SK 15472003 A 20020614; US 48019503 A 20031210; ZA 200400401 A 20040120