

Title (en)  
POLYMERISABLE MASSES WITH CROSS-LINKABLE NANOPARTICLES

Title (de)  
POLYMERISIERBARE MASSE MIT VERNETZENDEN NANOPARTIKELN

Title (fr)  
MATIÈRE POLYMÉRISABLE COMPRENANT DES NANOPARTICULES RÉTICULANTES

Publication  
**EP 2265650 A1 20101229 (DE)**

Application  
**EP 09731698 A 20090420**

Priority  

- EP 2009002855 W 20090420
- EP 08007581 A 20080418
- EP 09731698 A 20090420

Abstract (en)  
[origin: EP2110389A1] Polymerizable mass comprises (a) acrylate and/or methacrylate with a glass transitional temperature of 0[deg] C; 0.5-70 wt. % of silicon dioxide particle with an average particle size of 1-150 nm, where the polymerizable groups are on the surface of the particle; and (c) 2 wt.% of crosslinking molecule. Independent claims are included for: (1) a polymer material obtained by hardening the polymerizable mass; and (2) an impact modifier for polymer comprising a core-shell-particle, where: the core exhibits the hardened polymerizable mass, the shell exhibits a core grafted acrylate- and/or methacrylate shell, which is preferably free of silicon dioxide particles and the shell preferably contains PMMA.

IPC 8 full level  
**C08F 220/14** (2006.01); **C08F 2/44** (2006.01); **C08K 9/06** (2006.01)

CPC (source: EP KR US)  
**C08F 2/44** (2013.01 - EP US); **C08F 20/12** (2013.01 - EP US); **C08F 220/14** (2013.01 - KR); **C08F 220/1804** (2020.02 - EP KR US); **C08K 3/36** (2013.01 - KR); **C08K 5/0025** (2013.01 - EP US); **C08K 9/04** (2013.01 - KR); **C08K 9/06** (2013.01 - EP US); **C08L 33/06** (2013.01 - KR); **C08K 5/5425** (2013.01 - EP US)

Citation (search report)  
See references of WO 2009127434A1

Citation (examination)  

- DE 102006039638 B3 20071115 - FRAUNHOFER GES FORSCHUNG [DE]
- EP 0142784 A1 19850529 - BAYER AG [DE]
- EP 0803240 A2 19971029 - IVOCLAR AG [LI]
- EP 1947141 A1 20080723 - FRAUNHOFER GES FORSCHUNG [DE]
- JP S6296539 A 19870506 - TOKUYAMA SODA KK

Designated contracting state (EPC)  
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 SE SI SK TR

Designated extension state (EPC)  
AL BA RS

DOCDB simple family (publication)  
**EP 2110389 A1 20091021**; CA 2721601 A1 20091022; CA 2721601 C 20131210; CN 102007152 A 20110406; CN 102007152 B 20131030; EP 2265650 A1 20101229; JP 2011517719 A 20110616; KR 20110008240 A 20110126; KR 20160093117 A 20160805; US 2011112251 A1 20110512; US 8466245 B2 20130618; WO 2009127434 A1 20091022

DOCDB simple family (application)  
**EP 08007581 A 20080418**; CA 2721601 A 20090420; CN 200980113058 A 20090420; EP 09731698 A 20090420; EP 2009002855 W 20090420; JP 2011504384 A 20090420; KR 20107025810 A 20090420; KR 20167020921 A 20090420; US 98826009 A 20090420