

Title (en)

Electrically conductive metal/plastic hybrid comprising a polymer material, a first metal and metal particles of a second metal embedded in the first metal and method of producing such

Title (de)

Elektrisch leitfähige Metall-/Kunststoffmischung mit einem Polymermaterial, einem ersten Metall und Metallpartikel eines zweiten Metalls eingebettet in das erste Metall und Herstellungsverfahren dafür

Title (fr)

Hybride métallique/plastique électriquement conducteur comportant un matériau polymère, premier métal et particules métalliques d'un second métal intégré dans le premier métal et son procédé de production

Publication

**EP 2557571 B1 20140702 (EN)**

Application

**EP 11176866 A 20110808**

Priority

EP 11176866 A 20110808

Abstract (en)

[origin: EP2557571A1] The invention relates to an electrically conductive metal/plastic hybrid which comprises a matrix of a polymer material, a network embedded in the matrix and made of a metal having a first melting temperature, and metal particles within the network having a second melting temperature higher than the first melting temperature. Further, the invention relates to a method of producing such a metal/plastic hybrid. Metal/plastic hybrids of the afore-mentioned type are known from the prior art, but in order to achieve high electric conductivity, contain high percentages of the higher melting metal particles, which gives them a high density and a high heat capacity. The invention provides metal/plastic hybrids with a lower density and a lower heat capacity by using aluminium as one component of the metal particles. Furthermore, a method of producing such a metal/plastic hybrid is provided.

IPC 8 full level

**H01B 1/22** (2006.01)

CPC (source: EP)

**H01B 1/22** (2013.01)

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)

**EP 2557571 A1 20130213; EP 2557571 B1 20140702**; BR 112014002914 A2 20170301; BR 112014002914 B1 20200804; CA 2844277 A1 20130214; CA 2844277 C 20190709; CN 103718254 A 20140409; CN 103718254 B 20170329; JP 2014527693 A 20141016; KR 101949319 B1 20190218; KR 20140102175 A 20140821; WO 2013020946 A1 20130214

DOCDB simple family (application)

**EP 11176866 A 20110808**; BR 112014002914 A 20120806; CA 2844277 A 20120806; CN 201280038318 A 20120806; EP 2012065328 W 20120806; JP 2014524353 A 20120806; KR 20147006233 A 20120806