

Title (en)  
Artificial ballast for railway infrastructures

Title (de)  
Künstlicher Schotter für Eisenbahninfrastrukturen

Title (fr)  
Ballast artificiel pour infrastructures ferroviaires

Publication  
**EP 2088239 A3 20120822 (FR)**

Application  
**EP 09380016 A 20090203**

Priority  
ES 200800353 A 20080211

Abstract (en)  
[origin: EP2088239A2] The ballast has a set of synthesized particles with a hybrid geometry obtained by a combination of a polyhedric, tronco-conic, ellipsoidal or spherical type identical shape and different dimensions with studied proportions. The particles are made of materials constituting a concrete or a high resistive mortar with small size aggregate, hydraulic cement and a bituminous product with addition of synthetic fibers. The materials have density ranging between 1.5 and 2.5 gram per cubic centimeters. The hybrid geometry and a composition of the materials of the particles are controlled.

IPC 8 full level  
**E01B 1/00** (2006.01)

CPC (source: EP ES)  
**E01B 1/001** (2013.01 - EP ES)

Citation (search report)

- [XA] JP H08169737 A 19960702 - NAIGAI CERAMICS CO LTD
- [A] JP H10331101 A 19981215 - OHTSU TIRE & RUBBER CO LTD
- [AD] FR 2202978 A1 19740510 - SHIMIZU SOICHIRO [JP]
- [AP] JP 2008303641 A 20081218 - KANTEKKU ZOEN KENKYUSHO 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 2088239 A2 20090812; EP 2088239 A3 20120822**; ES 2356964 A1 20110415; ES 2356964 B1 20111129

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**EP 09380016 A 20090203**; ES 200800353 A 20080211