

Title (en)

DUAL-MEDIATED POLYMERIZABLE COMPOSITE FOR ADDITIVE MANUFACTURING

Title (de)

DUAL-VERMITTELTEN POLYMERISIERBARER VERBUNDSTOFF ZUR GENERATIVEN FERTIGUNG

Title (fr)

COMPOSITE POLYMERISABLE À MÉDIATION DOUBLE POUR LA FABRICATION ADDITIVE

Publication

EP 4013604 A1 20220622 (EN)

Application

EP 20853445 A 20200626

Priority

- US 201916541027 A 20190814
- US 2020039997 W 20200626

Abstract (en)

[origin: WO2021029975A1] A formulation for a photopolymer composite material for a 3D printing system includes an acrylate monomer or an acrylate oligomer, an inorganic hydrate, a reinforcing filler, a coinitiator, a thermal initiator, and an ultraviolet (UV) initiator. In the formulation the acrylate monomer or the acrylate oligomer may be between about 10.0 - 30.0 w% of the formulation. The thermal initiator may be between about 0.001 - 0.05 w%, the co-initiator may be between about 0.001 - 0.05 w%, and the UV initiator may be between about 0.001 - 0.2 w% of the formulation. A method of generating a formulation of a photopolymer composite material for use in a 3D printing system includes using an acrylate monomer or an acrylate oligomer, an inorganic hydrate, a reinforcing filler, a co-initiator, a thermal initiator, and an ultraviolet (UV) initiator.

IPC 8 full level

B29C 64/165 (2017.01); **C08F 2/50** (2006.01); **C08F 20/32** (2006.01); **C08K 3/20** (2006.01); **C08K 3/38** (2006.01); **C08K 5/14** (2006.01)

CPC (source: EP KR)

B29C 64/314 (2017.07 - EP KR); **B33Y 40/10** (2020.01 - EP KR); **B33Y 70/00** (2014.12 - EP); **B33Y 70/10** (2020.01 - KR); **C08F 2/50** (2013.01 - KR); **C08F 122/1006** (2020.02 - EP KR); **C08F 222/103** (2020.02 - EP KR); **C08K 3/013** (2017.12 - EP KR); **C08K 3/22** (2013.01 - EP KR); **C08K 3/36** (2013.01 - EP KR); **C08K 3/38** (2013.01 - EP KR); **B29C 64/124** (2017.07 - KR); **B29K 2105/0002** (2013.01 - KR); **B29K 2105/0032** (2013.01 - KR); **B29K 2503/04** (2013.01 - KR); **B29K 2509/00** (2013.01 - KR); **B29K 2509/02** (2013.01 - KR); **B29K 2509/08** (2013.01 - KR); **B29K 2509/10** (2013.01 - KR); **C08F 2/50** (2013.01 - EP); **C08K 2003/227** (2013.01 - EP KR); **C08K 2003/387** (2013.01 - EP)

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

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

WO 2021029975 A1 20210218; CA 3149186 A1 20210218; CN 114630745 A 20220614; EP 4013604 A1 20220622; EP 4013604 A4 20230816; JP 2022544547 A 20221019; JP 7423756 B2 20240129; KR 20220077123 A 20220608; MX 2022001851 A 20220530

DOCDB simple family (application)

US 2020039997 W 20200626; CA 3149186 A 20200626; CN 202080058244 A 20200626; EP 20853445 A 20200626; JP 2022509066 A 20200626; KR 20227008381 A 20200626; MX 2022001851 A 20200626