

Title (en)

RADIATION-CURABLE COMPOSITION FOR USE IN RAPID-PROTOTYPING OR RAPID-MANUFACTURING METHODS

Title (de)

STRALENHÄRTBARE ZUSAMMENSETZUNG ZUR VERWENDUNG IN RAPID-PROTOTYPING ODER RAPID-MANUFACTURING VERFAHREN

Title (fr)

COMPOSITION DURCISSABLE PAR RAYONNEMENT DESTINÉE À ÊTRE UTILISÉE DANS UN PROCÉDÉ DE PROTOTYPAGE RAPIDE OU DE FABRICATION RAPIDE

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Application

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Abstract (en)

[origin: WO2020058464A1] The invention relates to a polymerisable, radiation-curable, in particular UV/Vis-, UV-, or Vis-curable composition, comprising (i) monomers and (ii) at least one further component, wherein the (i) monomers comprise (a) at least one acrylate with an additional carboxy group, acrylate with at least one additional anhydride group of carboxy groups and/or derivative of the aforementioned acrylates, (b) at least one difunctional acrylate with bivalent alicyclic group and/or at least one difunctional methacrylate with bivalent alicyclic group, (c) optionally at least one disubstituted 4,4'-di(oxabenzene)dialkylmethane of formula I, and wherein (ii) the at least one further component comprises (d) at least one photoinitiator for the UV and/or Vis range or a photoinitiator system. The composition according to the invention is suitable for producing dental prosthetic parts, orthopaedic appliances or dental pre-forms, which are characterised by a) a bending strength of greater than or equal to 50 MPa and/or b) a modulus of elasticity of greater than or equal to 1500 MPa, and/or c) a bending fracture of greater than or equal to 1.1 MPa m^{1/2} and/or d) a fracture work of greater than 250 J/m² DIN EN ISO 20795-2, wherein these can be produced in a rapid-prototyping or in a rapid-manufacturing or rapid-tooling method.

IPC 8 full level

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