

Title (en)  
METHOD OF STABILIZING A PHOTOHARDENING INHIBITOR-PERMEABLE FILM IN THE MANUFACTURE OF THREE-DIMENSIONAL OBJECTS

Title (de)  
VERFAHREN ZUR STABILISIERUNG EINES PHOTOHÄRTENDEN INHIBITORPERMEABLEN FILMS BEI DER HERSTELLUNG VON DREIDIMENSIONALEN OBJEKTEN

Title (fr)  
PROCÉDÉ DE STABILISATION D'UN FILM PERMÉABLE À UN INHIBITEUR DE PHOTODURCISSEMENT DANS LA FABRICATION D'OBJETS TRIDIMENSIONNELS

Publication  
**EP 3972812 A4 20230712 (EN)**

Application  
**EP 20809861 A 20200519**

Priority  
• US 201916417027 A 20190520  
• US 2020033557 W 20200519

Abstract (en)  
[origin: WO2020236791A1] A method and apparatus for making a three-dimensional object by solidifying a photohardenable material are shown and described. A photohardening inhibitor is admitted into a surface of a photohardenable material through a flexible film to create a "non-solidification zone" where little or no solidification occurs. The non-solidification zone prevents the exposed surface of the photohardenable material from solidifying in contact with the film. The inhibitor tends to cause the film to deform along the build axis, thereby creating a non-planar interface between the photohardenable material and the film, which distorts the resulting three-dimensional object. An apparatus is provided to stabilize the flexible film and eliminate or minimize such deformation.

IPC 8 full level  
**B29C 64/124** (2017.01); **B29C 64/135** (2017.01); **B29C 64/255** (2017.01); **B33Y 30/00** (2015.01)

CPC (source: EP)  
**B29C 64/124** (2017.08); **B29C 64/255** (2017.08); **B33Y 30/00** (2014.12)

Citation (search report)  
• [A] WO 2019070380 A1 20190411 - GLOBAL FILTRATION SYSTEMS DBA GULF FILTRATION SYSTEMS INC [US]  
• [A] WO 2017053783 A1 20170330 - CARBON3D INC [US]  
• [A] US 2008231731 A1 20080925 - HULL CHARLES W [US], et al  
• See also references of WO 2020236791A1

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)  
**WO 2020236791 A1 20201126**; EP 3972812 A1 20220330; EP 3972812 A4 20230712

DOCDB simple family (application)  
**US 2020033557 W 20200519**; EP 20809861 A 20200519