

Title (en)  
METHOD FOR CONNECTING TWO JOINING SURFACES

Title (de)  
VERFAHREN ZUM VERBINDEN ZWEIER FÜGEFLÄCHEN

Title (fr)  
PROCÉDÉ POUR RELIER DEUX SURFACES DE JONCTION

Publication  
**EP 4200124 A1 20230628 (DE)**

Application  
**EP 21762684 A 20210816**

Priority  
• DE 102020122040 A 20200824  
• DE 102020133602 A 20201215  
• EP 2021072681 W 20210816

Abstract (en)  
[origin: WO2022043107A1] The present invention relates to a method for connecting a first joining surface of a first workpiece to a second joining surface of a second workpiece, said method having the steps of: 1) bringing the first and the second joining surface into contact with each other, 2) bringing a first tool part into contact with the first workpiece, and introducing energy into the first workpiece via the first tool part. In order to specify a method which can also weld materials having a low thermoplastic component or even materials without a thermoplastic component, without having to resort to adhesives, it is proposed in accordance with the invention that, before step 1), a step of: A) applying particles formed from thermoplastic material to the first and/or second joining surface is performed.

IPC 8 full level  
**B29C 65/08** (2006.01); **B29C 65/00** (2006.01); **B29C 65/48** (2006.01); **B29C 65/52** (2006.01); **B29C 65/78** (2006.01); **B31F 5/00** (2006.01); **B31F 5/04** (2006.01); **B32B 37/00** (2006.01); **B32B 37/06** (2006.01); **B32B 37/12** (2006.01)

CPC (source: EP US)  
**B29C 65/086** (2013.01 - EP US); **B29C 65/088** (2013.01 - EP); **B29C 65/4815** (2013.01 - EP US); **B29C 65/486** (2013.01 - EP US); **B29C 65/52** (2013.01 - EP); **B29C 65/522** (2013.01 - EP US); **B29C 65/524** (2013.01 - EP); **B29C 65/7894** (2013.01 - EP US); **B29C 66/0222** (2013.01 - EP US); **B29C 66/1122** (2013.01 - EP US); **B29C 66/30325** (2013.01 - EP); **B29C 66/30326** (2013.01 - EP); **B29C 66/45** (2013.01 - EP US); **B29C 66/73921** (2013.01 - EP US); **B29C 66/83411** (2013.01 - EP US); **B29C 66/8762** (2013.01 - EP US); **B29C 66/9513** (2013.01 - US); **B31F 5/008** (2013.01 - EP); **B31F 5/04** (2013.01 - EP); **B29C 66/9513** (2013.01 - EP); **B32B 37/04** (2013.01 - EP); **B32B 2037/0092** (2013.01 - EP)

Citation (search report)  
See references of WO 2022043107A1

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

Designated validation state (EPC)  
KH MA MD TN

DOCDB simple family (publication)  
**DE 102020133602 A1 20220224**; CN 115884866 A 20230331; EP 4200124 A1 20230628; JP 2023539854 A 20230920; US 2023294365 A1 20230921; WO 2022043107 A1 20220303

DOCDB simple family (application)  
**DE 102020133602 A 20201215**; CN 202180050521 A 20210816; EP 2021072681 W 20210816; EP 21762684 A 20210816; JP 2023513225 A 20210816; US 202118021010 A 20210816