

Title (en)

COMPOSITE MOULDED BODY MADE OF A REACTION-BONDED MIXED CERAMIC INFILTRATED WITH SILICON

Title (de)

VERBUNDFORMKÖRPER AUS EINER REAKTIONSGEBUNDENEN, MIT SILIZIUM INFILTRIERTEN MISCHKERAMIK

Title (fr)

CORPS MOULÉ COMPOSITE CONSTITUÉ D'UNE CÉRAMIQUE MIXTE LIÉE PAR RÉACTION INFILTRÉE AVEC DU SILICIUM

Publication

EP 4323326 A1 20240221 (DE)

Application

EP 21721875 A 20210416

Priority

EP 2021059908 W 20210416

Abstract (en)

[origin: CA3214362A1] A shaped composite body of a reaction-bonded, silicon-infiltrated mixed ceramic, the microstructure of which is determined by primary grains of crystalline B4C grains (1) of mean grain size d50 > 100 µm and < 500 µm and a fraction of > 10%, by weight, and < 50%, by weight, and by primary grains of a finer silicon carbide with d50 < 70 µm and a fraction of > 10%, by weight, and < 50%, by weight, and the primary grains are siliconized (3) bonded by secondarily formed silicon carbide with a fraction of > 5%, by weight and < 25%, by weight, in a silicon carbide matrix having a free metallic silicon (2) content of > 1%, by weight, and < 20%, by weight.

IPC 8 full level

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CPC (source: EP IL KR US)

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