

Title (en)

CUTTING ELEMENT AND THE USE THEREOF

Title (de)

SCHNEIDELEMENT UND VERWENDUNG DAVON

Title (fr)

ÉLÉMENT DE COUPE ET SON UTILISATION

Publication

**EP 4072804 A1 20221019 (DE)**

Application

**EP 20812090 A 20201201**

Priority

- EP 19215487 A 20191212
- EP 2020084028 W 20201201

Abstract (en)

[origin: WO2021115836A1] The invention relates to a cutting element (1) which is designed for cutting a non-metallic composite material of a matrix and particles held together by the matrix, comprising a flank (4), a face (5) and a cutting edge (6) coated with an edge coating (2) by which edge the flank (4) and the face (5) are connected to one another, with which the non-metallic composite material can be machined in an improved manner, such that the cutting edge (6) is curved within a cutting edge portion (8), and away therefrom, such that the cutting edge (2) has, at any point in the cutting edge portion (8) immediately below the edge coating (2) in a section in a section plane that is perpendicular to the cutting edge (6), a local curvature radius (9) which is greater than or equal to 10 µm and smaller than or equal to 80 µm, preferably greater than or equal to 15 µm and smaller than or equal to 60 µm, even more preferably greater than or equal to 20 µm and smaller than or equal to 40 µm.

IPC 8 full level

**B27G 15/00** (2006.01); **B26D 1/00** (2006.01); **B27C 1/00** (2006.01); **C23C 30/00** (2006.01)

CPC (source: EP US)

**B23B 27/145** (2013.01 - US); **B27G 15/00** (2013.01 - EP); **B23B 2200/245** (2013.01 - EP US); **B23B 2222/16** (2013.01 - EP US);  
**B23B 2222/28** (2013.01 - EP US); **B23B 2226/275** (2013.01 - EP US); **B23B 2228/04** (2013.01 - EP US); **B23B 2228/105** (2013.01 - EP US);  
**B23C 2200/246** (2013.01 - EP US)

Citation (search report)

See references of WO 2021115836A1

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)

**EP 3835018 A1 20210616**; CN 114786896 A 20220722; CN 114786896 B 20230704; EP 4072804 A1 20221019; JP 2023505342 A 20230208;  
US 2023001487 A1 20230105; WO 2021115836 A1 20210617

DOCDB simple family (application)

**EP 19215487 A 20191212**; CN 202080086000 A 20201201; EP 2020084028 W 20201201; EP 20812090 A 20201201;  
JP 2022534475 A 20201201; US 202017784737 A 20201201