

Title (en)
SILICON NITRIDE SUBSTANCES CONTAINING SINTERING ADDITIVES AND SiO₂, METHOD FOR PRODUCING THEM AND USE OF THE SAME

Title (de)
SINTERADDITIVE UND SILICIUMDIOXID-ENTHALTENDE SILICIUMNITRIDWERKSTOFFE, EIN VERFAHREN ZU DEREN HERSTELLUNG UND DEREN VERWENDUNG

Title (fr)
MATERIAUX DE NITRURE DE SILICIUM CONTENANT DES ADDITIFS DE FRITTAGE ET DU SiO₂, PROCEDE PERMETTANT DE LES PRODUIRE ET LEUR UTILISATION

Publication
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Application
EP 98951501 A 19981007

Priority
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Abstract (en)
[origin: DE19746008A1] A sintering additive- and SiO₂-containing silicon nitride material has an extremely high grain boundary SiO₂ content and a low oxynitride content. In a sintering additive- and SiO₂-containing silicon nitride material, the molar ratio of the SiO₂ in the grain boundary phase to the sintering additive including SiO₂ in the grain boundary phase is greater than 60 % and the oxynitride content is less than 1 %. An Independent claim is also included for a process for producing the above silicon nitride material, in which (a) the Si₃N₄ powder is thermally oxidized alone or together with the sintering additive; (b) the Si₃N₄ powder is tribo-oxidized, alone or together with the sintering additive and optionally further additives, during grinding; and/or (c) the Si₃N₄ powder is reacted with a SiO₂-forming component or SiO₂ before or during grinding with the sintering additive.

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IPC 8 full level
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