Title (en)

SILICON NITRIDE SUBSTANCES CONTAINING SINTERING ADDITIVES AND SiO 2?, 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 SiO 2?, PROCEDE PERMETTANT DE LES PRODUIRE ET LEUR UTILISATION

Publication

EP 1025062 A1 20000809 (DE)

Application

EP 98951501 A 19981007

Priority

- DE 19746008 A 19971020
- EP 9806375 W 19981007

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.

IPC 1-7

C04B 35/593; C04B 35/584; F16C 33/04

IPC 8 full level

C04B 35/584 (2006.01); **C04B 35/593** (2006.01); **F16C 33/04** (2006.01)

CPC (source: EP US)

C04B 35/584 (2013.01 - EP US); **C04B 35/593** (2013.01 - EP US); **C04B 35/5935** (2013.01 - EP US); **C04B 35/6261** (2013.01 - EP US); **C04B 35/6265** (2013.01 - EP US); **C04B 35/62665** (2013.01 - EP US); **C04B 35/62685** (2013.01 - EP US); **C04B 35/62807** (2013.01 - EP US); **F16C 33/043** (2013.01 - EP US); C04B 2235/3217 (2013.01 - EP US); C04B 2235/3225 (2013.01 - EP US); C04B 2235/3232 (2013.01 - EP US); C04B 2235/3244 (2013.01 - EP US); C04B 2235/3256 (2013.01 - EP US); C04B 2235/3258 (2013.01 - EP US); C04B 2235/3418 (2013.01 - EP US); C04B 2235/3826 (2013.01 - EP US); C04B 2235/3856 (2013.01 - EP US); C04B 2235/3865 (2013.01 - EP US); C04B 2235/3869 (2013.01 - EP US); C04B 2235/3886 (2013.01 - EP US); C04B 2235/3891 (2013.01 - EP US); C04B 2235/3895 (2013.01 - EP US); C04B 2235/483 (2013.01 - EP US); C04B 2235/5409 (2013.01 - EP US); C04B 2235/5445 (2013.01 - EP US); C04B 2235/6587 (2013.01 - EP US); C04B 2235/77 (2013.01 - EP US); C04B 2235/80 (2013.01 - EP US); C04B 2235/85 (2013.01 - EP US); C04B 2235/96 (2013.01 - EP US); C04B 2235/9692 (2013.01 - EP US)

Citation (search report)

See references of WO 9920579A1

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