

Title (en)
DENSE CERAMICS CONTAINING A SOLID SOLUTION AND METHOD FOR MAKING THE SAME.

Title (de)
EINE FESTE LÖSUNG ENTHALTENDE DICHTER KERAMIKEN UND DEREN HERSTELLUNG.

Title (fr)
CERAMIQUE DENSE CONTENANT UNE SOLUTION SOLIDE ET SON PROCÉDE DE FABRICATION.

Publication
EP 0241514 A4 19880928 (EN)

Application
EP 86906120 A 19860919

Priority
US 77825185 A 19850920

Abstract (en)
[origin: WO8701693A1] Dense ceramic composites comprising a mixture of a solid solution containing the elements Si, C, Al, O and N (referred to by the acronym SiCAION) and a high temperature refractory phase have desirable physical properties and can be formed by pressureless sintering techniques. The refractory phase can be SiC, AlN, Al₂O₃, or AlON and constitutes between 1 and 99% of the volume of the ceramic. The method for pressureless sintering may also be used for densification of SiCAION ceramics, or composites containing SiCAION, allowing fabrication of the same into complex shapes economically.

IPC 1-7
C04B 35/56; **C04B 35/58**

IPC 8 full level
C04B 35/565 (2006.01); **C04B 35/581** (2006.01); **C04B 35/65** (2006.01)

CPC (source: EP)
C04B 35/565 (2013.01); **C04B 35/581** (2013.01); **C04B 35/65** (2013.01)

Citation (search report)
• [A] FR 2537568 A1 19840615 - ASAHI GLASS CO LTD [JP]
• [X] CHEMICAL ABSTRACTS, vol. 102, no. 10, March 1985, page 284, abstract no. 83350n, Columbus, Ohio, US; & JP-A-59 190 268 (ASAHI GLASS CO., LTD) 29-10-1984
• [XP] JOURNAL OF MATERIALS SCIENCE, vol. 21, no. 4, April 1986, pages 1448-1456, Chapman and Hall Ltd, London, GB; J.-L. HUANG et al.: "Sintering behaviour and properties of SiCAION ceramics"
• See references of WO 8701693A1

Cited by
CN113024261A

Designated contracting state (EPC)
AT BE CH DE FR GB IT LI LU NL SE

DOCDB simple family (publication)
WO 8701693 A1 19870326; CA 1256126 A 19890620; EP 0241514 A1 19871021; EP 0241514 A4 19880928

DOCDB simple family (application)
US 8601957 W 19860919; CA 518683 A 19860919; EP 86906120 A 19860919