

Title (en)

LOW CTE CORDIERITE BODIES WITH NARROW PORE SIZE DISTRIBUTION AND METHOD OF MAKING SAME

Title (de)

CORDIERITKÖRPER MIT ENGER PORENGRÖSSENVERTEILUNG UND GERINGER THERMISCHER AUSDEHNUNG, UND VERFAHREN ZU DEREN HERSTELLUNG

Title (fr)

CORPS DE CORDIERITE A FAIBLE COEFFICIENT DE DILATATION THERMIQUE, AYANT UNE REPARTITION ETROITE DE LA TAILLE DES PORES, ET PROCEDE DE FABRICATION DE CES CORPS

Publication

**EP 1060149 A1 20001220 (EN)**

Application

**EP 99906790 A 19990209**

Priority

- US 9902641 W 19990209
- US 7584698 P 19980225

Abstract (en)

[origin: WO9943629A1] Cordierite body of CTE at 25-800 DEG C of  $\leq 4 \times 10^{-7} \text{C}^{-1}$ , at least 85 % of porosity having pore diameter of 0.5-5.0T; or  $> 4-6 \times 10^{-7} \text{C}^{-1}$ , porosity at least 30 vol %, at least 85 % of porosity has pore diameter 0.5-5.0T. Raw materials talc, Al<sub>2</sub>O<sub>3</sub> source, and kaolin, calcined kaolin, and/or silica, and optionally spinel, particle diameter of talc  $\leq 3.0T$ , of Al<sub>2</sub>O<sub>3</sub> source  $\leq 2.0T$ , kaolin is  $< 35 \text{ wt.}\%$  of raw materials when particle diameter is  $< 2.0T$ , are blended with vehicle and aids into plastic mixture. Green body is formed, dried, fired at 1370 DEG C-1435 DEG C. When particle diameter of talc is  $< 2.0T$ , and Al<sub>2</sub>O<sub>3</sub> source is  $< 20 \text{ wt.}\%$  of raw materials, and dispersible high surface area Al<sub>2</sub>O<sub>3</sub> source having particle diameter of  $< 0.3T$ , is  $< 5.0 \text{ wt.}\%$  of raw materials, and particle diameter of kaolin is  $< 2.0T$ , heating rate from 1150 DEG C-1275 DEG C is  $> 200 \text{ DEG C/hr}$ . When particle diameter of talc is  $\leq 2.0T$ , and Al<sub>2</sub>O<sub>3</sub> source is  $< 20 \text{ wt.}\%$  of raw materials, and dispersible high surface area Al<sub>2</sub>O<sub>3</sub> source having particle diameter of  $< 0.3T$ , is  $< 5.0 \text{ wt.}\%$  of raw materials, and particle diameter of kaolin is  $< 2.0T$ , heating rate from 1150 DEG C-1275 DEG C is  $> 50 \text{ DEG C/hr}$  and  $< 600 \text{ DEG C/hr}$ . When Al<sub>2</sub>O<sub>3</sub> source is less than 20 wt.% of raw materials, and dispersible Al<sub>2</sub>O<sub>3</sub> source having particle diameter  $< 0.3T$  is  $\geq 5.0 \text{ wt.}\%$  of raw materials, and particle diameter of kaolin is  $\leq 2.0T$ , heating rate from 1150 DEG C-1275 DEG C is  $> 50 \text{ DEG C/hr}$ . When particle diameter of kaolin is  $> 2.0T$ , heating rate from 1150 DEG C-1275 DEG C is  $\leq 600 \text{ DEG C/hr}$  and  $> 30 \text{ DEG C/hr}$ .

IPC 1-7

**C04B 35/18**; **C04B 35/20**

IPC 8 full level

**C04B 35/195** (2006.01); **C04B 35/622** (2006.01); **C04B 38/00** (2006.01)

CPC (source: EP)

**C04B 35/195** (2013.01); **C04B 38/00** (2013.01)

Designated contracting state (EPC)

BE DE FR GB

DOCDB simple family (publication)

**WO 9943629 A1 19990902**; CN 1287546 A 20010314; EP 1060149 A1 20001220; EP 1060149 A4 20020717; JP 2002504476 A 20020212

DOCDB simple family (application)

**US 9902641 W 19990209**; CN 99802000 A 19990209; EP 99906790 A 19990209; JP 2000533391 A 19990209