

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

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Application

EP 99906790 A 19990209

Priority

- US 9902641 W 19990209
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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, Al₂O₃ source, and kaolin, calcined kaolin, and/or silica, and optionally spinel, particle diameter of talc $\leq 3.0T$, of Al₂O₃ 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 Al₂O₃ source is $< 20 \text{ wt.}\%$ of raw materials, and dispersible high surface area Al₂O₃ 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 Al₂O₃ source is $< 20 \text{ wt.}\%$ of raw materials, and dispersible high surface area Al₂O₃ 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 Al₂O₃ source is less than 20 wt.% of raw materials, and dispersible Al₂O₃ 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 $> 30 \text{ DEG C/hr}$.

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CPC (source: EP)

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Citation (search report)

- [PX] EP 0894776 A1 19990203 - CORNING INC [US]
- [PX] EP 0894777 A1 19990203 - CORNING INC [US]
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- [A] US 4434117 A 19840228 - INOBUCHI KAZUHIRO [JP], et al
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- See references of WO 9943629A1

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