

Title (en)  
REINFORCING GLASS YARNS WITH LOW DIELECTRIC CONSTANTS

Title (de)  
VERSTÄRKUNGSGLASFASERN MIT NIEDRIGER DIELEKTRIZITÄTKONSTANTE

Title (fr)  
FILS DE VERRE DE RENFORCEMENT A FAIBLES CONSTANTES DIELECTRIQUES

Publication  
**EP 1390313 A1 20040225 (FR)**

Application  
**EP 02730379 A 20020502**

Priority  
• FR 0201509 W 20020502  
• FR 0106859 A 20010523

Abstract (en)  
[origin: WO02094728A1] The invention concerns a glass yarn whereof the composition comprises the following constituents in the limits defined, expressed in weight percentages: SiO<sub>2</sub> 50 to 60 %, preferably SiO<sub>2</sub>  $\geq$  52 % and/or SiO<sub>2</sub>  $\leq$  57 %; Al<sub>2</sub>O<sub>3</sub> 10 to 19 %, preferably Al<sub>2</sub>O<sub>3</sub>  $\geq$  13 % and/or Al<sub>2</sub>O<sub>3</sub>  $\leq$  17 %; B<sub>2</sub>O<sub>3</sub> 16 to 25 %; P<sub>2</sub>O<sub>5</sub> 0.5 to 4 %; Na<sub>2</sub>O  $\leq$  1.5 %, preferably Na<sub>2</sub>O  $\leq$  0.8 %; K<sub>2</sub>O  $\leq$  1.5 %, preferably K<sub>2</sub>O  $\leq$  0.8 %; R<sub>2</sub>O  $\leq$  2 %, preferably R<sub>2</sub>O  $\leq$  1 %; CaO  $\leq$  10 %; MgO  $\leq$  10 %; F  $\leq$  0 to 2 %; RO 4 to 15 %, preferably RO  $\geq$  6 % and/or RO  $\leq$  10 % ; miscellaneous  $\leq$  3 % ; wherein R<sub>2</sub>O = Na<sub>2</sub>O + K<sub>2</sub>O + Li<sub>2</sub>O and RO = CaO + MgO. The dielectric properties of said glass compositions are particularly advantageous.

IPC 1-7  
**C03C 13/00**; **C03C 3/118**

IPC 8 full level  
**C03C 3/118** (2006.01); **C03C 13/00** (2006.01); **H05K 1/03** (2006.01)

CPC (source: EP US)  
**C03C 3/118** (2013.01 - EP US); **C03C 13/00** (2013.01 - EP US); **H05K 1/0366** (2013.01 - EP US); **Y10T 428/249947** (2015.04 - EP US); **Y10T 428/2933** (2015.01 - EP US)

Citation (search report)  
See references of WO 02094728A1

Designated contracting state (EPC)  
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)  
**WO 02094728 A1 20021128**; CN 1511120 A 20040707; EP 1390313 A1 20040225; FR 2825084 A1 20021129; FR 2825084 B1 20030718; JP 2004525066 A 20040819; MX PA03010595 A 20040309; RU 2003136776 A 20050527; US 2004175557 A1 20040909

DOCDB simple family (application)  
**FR 0201509 W 20020502**; CN 02810477 A 20020502; EP 02730379 A 20020502; FR 0106859 A 20010523; JP 2002591405 A 20020502; MX PA03010595 A 20020502; RU 2003136776 A 20020502; US 47861604 A 20040416