

PATENT

GLASS STRANDS CAPABLE OF REINFORCING ORGANIC AND/OR INORGANIC MATERIALS, PROCESS FOR MANUFACTURING SAID GLASS STRANDS AND COMPOSITION USED

Filed by: SAINT-GOBAIN VETROTEX FRANCE S.A.

ABSTRACT

Glass reinforcement strand, the composition of which comprises the following constituents, within the limits defined below, expressed as percentages by weight:

SiO ₂	50 to 60%, preferably SiO ₂ ≥ 52% and/or SiO ₂ ≤ 57%;
Al ₂ O ₃	10 to 19%, preferably Al ₂ O ₃ ≥ 13% and/or Al ₂ O ₃ ≤ 17%;
B ₂ O ₃	16 to 25%;
ZrO ₂	0.5 to 1.5%;
Na ₂ O	≤ 1.5%, preferably Na ₂ O ≤ 0.8%;
K ₂ O	≤ 1.5%, preferably K ₂ O ≤ 0.8%;
R ₂ O	≤ 2%, preferably R ₂ O ≤ 1%;
CaO	≤ 10%;
MgO	≤ 10%;
F	0 to 2%;
TiO ₂	0 to 3%;
RO	4 to 15%, preferably RO ≥ 6% and/or RO ≤ 10%; and
Various	≤ 3%, where R ₂ O = Na ₂ O + K ₂ O + Li ₂ O, and RO = CaO + MgO.

The dielectric properties of such glass compositions are particularly advantageous in the MHz and GHz ranges.