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HIGH MECHANICAL AND CHEMICAL PERFORMANCE GLASS-CERAMICS TILE

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ABSTRACT

A glass-ceramic based on spodumene-β and cordierite crystalline phases has been investigated by differential thermo analysis (DTA), x-ray diffraction (XRD), thermal linear shrinkage (TLS), scanning electron microcopy (SEM) and abrasion wear measurements. The parent glass frit, obtained by melting of natural raw material, was powdered and then formed and sintered so that ceramic tiles samples were obtained. Results showed that the obtained glass-ceramic tile with high abrasion wear and chemical resistances can be a potential candidate as a high performance ceramic floor tile.

Key words: Glass-ceramics, processing, chemical resistance, wear resistance.