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**EFFECT OF LZSA GLASS-CERAMIC ADDITION ON THE WEAR OF PRESSURELESS SINTERED ALUMINA**

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This work aims to evaluate the influence of a LZSA glass-ceramic in the mechanical behavior of alumina. Thus, composites were prepared from three particle size aluminas and a LZSA glass-ceramic composition (11.6Li<sub>2</sub>O-16.8ZrO<sub>2</sub>-68.2SiO<sub>2</sub>-3.4Al<sub>2</sub>O<sub>3</sub>, 7 to 21 vol%). Specimens were obtained by uniaxial pressing. Sintering temperature and holding time were found to be different for each composite. Structural characterization (bulk density and crystalline phases), mechanical (flexure strength, modulus of elasticity, fracture toughness and fracture energy) and microstructural (grain size) were carried out. Fine-grained alumina-based composite containing 15 vol% of glass-ceramic showed fracture toughness of 4.93 MPa.m<sup>0.5</sup>. The results showed that the addition of the LZSA glass-ceramic improved the mechanical properties of alumina with potential increase of its wear resistance.