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## **THE INFLUENCE OF SILICA FUME ON THE MECHANICAL STRENGTH AND DRYING SHRINKAGE OF FIBER CEMENT REINFORCED WITH PVA FIBER**

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### **Abstract.**

The main point of this paper is to study the influence of silica fume on the drying shrinkage and flexural resistance of fiber cement, produced by the Hatscheck process. Samples of fiber cement reinforced with PVA and cellulose fibers were tested with two different compositions, a sample with silica fume and other without silica fume. Two test series were performed: shrinkage and flexural resistance were measured. In spite of the change in the formulation to happen just in the cementitious matrix, they did not happen changes of LOP and E of the composite. However, the results of MOR of the composite with silica fume were larger than the other composite. The fiber cement with silica fume presented larger shrinkage than the other, for a same loss of mass. That happened due to the refinement of pores inferred by the silica fume addition, measured for MIP.