



## **Water absorption and porosity of repair mortars used in loss compensation in Hungary**

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The water absorption properties and porosity of repair mortars were studied under laboratory conditions. Commercially available repair mortars and laboratory made mixtures containing different binder aggregate ratio were prepared. The main aim of this study was to compare the hygric properties of repair mortars and porous Hungarian limestone in order to assess their compatibility. 50% of limestone aggregate of 1-2 mm in size, was added to both the commercially available repair mortars and to the laboratory mixtures. Water absorption properties of the pure repair mortars were compared to the ones with aggregate and to the ones of the porous limestone. Porosity of the pure porous limestone was in the order of 33-36 wt%, while that of the pure repair mortars were in between 25-30%. Experiments aimed to increase the porosity of the repair mortars by adding aggregate. Studied repair mortars with 50% of porous limestone aggregate had still much lower water absorption than that of the porous limestone with one exception. With adding aggregates the porosity of repair mortars increased but the pore-size distribution was not shifted to the macro-pore range that is a typical feature of the porous limestone. Thus the water absorption properties of the repair mortars did not show appropriate change even after adding porous limestone as an aggregate.