



Eocene marl in the monuments of Hungary, fabric and physical properties

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The Eocene calcareous marl, so called Buda Marl is a local dimension and ornamental stone of Budapest region, Hungary. It has been used from the Roman period onward in Hungary. However the most intense utilization was in the Renaissance period. The marl is very similar to some of the Italian limestones such as “pietra serena” in color thus Italian Renaissance stone cutters have used this material preferentially in Hungary. The marl series of Buda region can be grouped into at least two major lithologically slightly different rock types: i) buda marl and ii) bryozoa marl. Both rock types are light yellowish brown in monuments, but when freshly exposed they display grey color. Bedding is often visible. The fabric is variable ranging from globigerina wackestones to bryozoa-echinodermata packstones. The previous historic quarries are not well-known, however outcrops of Buda marl are still recognizable. The marl has an average density ranging from 2520 kg/m³, a mean effective porosity of 2.8 and a compressive strength of 46 MPa. The latter one decreases when the samples are water saturated to 33 MPa in average.