Thesis is about European map of built-up areas with high resolution and the term about imperviousness (Soil Sealing Layer). The main aim of this bachelor thesis is to evaluate thematic accuracy of the Soil Sealing database in the Czech Republic with use of various statistical methods. The theoretical part deals with problems of impervious surfaces, outlines the framework of database development with principles of its creation. It is also about accuracy assessment of spacial data with specific examples. Validation is based on comparison of assessed grid with visually interpreted orthophotos. The comparison will take place within the targeted selection of three locations. Statistical methods will be applied on obtained data for particular areas and clarify accuracy of database depending on compactness of settlements. According to the results of validation, single methods and outcomes will be critically evaluated. Achieved results will be compared with similarly oriented studies.