

# PREPARATION OF POPBETON® WITHOUT HEATING WITH USAGE OF „INTENZIFIKÁTOR“ OF ALKALINE ACTIVATION

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## Abstract

Research of usage of alkaline activation of fly ash has been doing for many years in cooperation of The Department of Construction Technology of The Faculty of Civil Engineering and The Department of Glass and Technology of The Institute of Chemical Technology. The aim of the study is the implementation of the theoretical knowledge about alkaline activation of fly ash into practice. Alkaline activated fly ash could be used as a binder in concrete and could substitute cement at all. This type of concrete was named POPbeton®. First part of research was focused on activation with heating and then the research was focused on activation of fly ash in laboratory conditions without any necessity of heating. It was necessary to use some new supplements to activation of fly ash. These supplements were named “intenzifikátor”.

The influence of this “intenzifikátor” to concrete working and physical-mechanical characteristics of POPbeton® is summarized in this poster. Some waste products as metakaoline or slag were used as admixtures too. Large usage of other waste products was showed. Some of them are possible to use in POPbeton® program. But different types of fly ashes were proved as crucial for general characteristics of POPbeton®. Global usage of fly ash can be proposed due to comparing of characteristic of different types of fly ashes. Their usage should correspond with fly ash production in The Czech Republic.

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