MORPHOLOGYCAL CHARACTERIZATION OF HIGH ALUMINA CEMENT - BASED MACRO DEFECT FREE CEMENTS

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Abstract: *Macro-defect-free (MDF) cements are cement- polymer composites characterised by high tensile and flexural strength. The main disadvantage of the actual MDF cements is their water sensitivity that limits the application. Until now, attempts have been made to overcome this weakness of MDF materials by compositional changing. But obviously, their morphology and hydrophylicity play an important role in the water sensitivity of MDF cements. The aim of this study is to characterize MDF cements from the morphological point of view, by using AFM and contact angle measurements, and to correlate the obtained results with the mechanical properties of MDF cements in initial state and after their storage in water.*

Key words: *macro-defect-free (MDF), cement, polymer, poly(vinyl alcohol), water sensitivity.*

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