



Research on the effect of sepiolite on combustion characteristics of wood plastic composites materials

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Abstract: In this study, the effect of sepiolite mineral on the fire resistance of polypropylene based wood plastic composite materials was investigated. The pellets were produced with twin screw extruder and plastic composites were obtained. The Limit oxygen index (LOI) and combustion tests of the produced plastic composites were performed according to the standards of ASTM 2863-09 (2006) and ASTM D 635 (1997) respectively. It has been found that the density of sepiolite mineral used as fire retardant in composite materials increases due to the increase of fill amount. Limit oxygen index and horizontal combustion test results have shown that combustion characteristics are positively affected. All the tests also found that the samples with 20% sepiolite had the most positive effect.

Keywords: Sepiolite, Polypropilen, LOI, Combustion