

PREPARATION OF POLYMER /GRAPHITE COMPOSITES FOR IMPROVEMENT IN THERMAL CONDUCTIVITY AND FLAMMABILITY RESISTANCE

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ABSTRACT

Graphite is naturally abundant and has significant influence on the thermal conductivity, flammability properties and thermal stability of filled materials. It is frequently used as filler for improvement of most polymer properties. Polymer/graphite composites have long been used in aerospace and sporting goods applications. The importance of thermal conductivity in polymer composites is needed for acceptable levels of thermal conductance in circuit boards, heat exchangers, appliances and machinery. Graphite halogen-free flame-retardant materials can be used for the manufacture of electric engineering materials and electronics, such as wires and cables. This study summarizes the various modifications and promising future on the flammability, thermal conductivity and thermal stability of the composites.