Accelerated Aging of Polymeric Composites in Laboratory Conditions

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A "composite" is characterized as the comibation of two or more materials with diametrically different properties, which result into the creation of a new superior and unique material. This is the most commondefinition that holds true for all composites, however, more recently the term "composite" describes reinforced plastics. Polymers are used in every walk of life now-a-days. They are not even hundred years old, but play the significant role in every sector of life such as sports, defense, medicine, automotive, electrical, agricultural etc. In the beginning, polymers were considered as excellent insulators, but today also conductive polymers are available.. In general, polymers have good water resistance, but there are some polymers with good water absorbtion. Presented article deals with monitoring the changes in the mechanical properties of composites with polymer matrix. Composite has been formed from the PA (polyamide) matrix with glass fibers reinforcement. Mechanical properties, impact strength (Charpy) and micro-hardness (Vickers) have been evaluated on samples of the composite before and after the exposure of UV radiation.

Keywords: composite, artificial, aging, polymer, matrix, UV, radiaton

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