

## Rheological Measurement of Polymeric Composites before and after UV Degradation

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**The aim of this paper is the comparison of selected rheological properties of polymeric composites with glass fibers materials before and after exposure in UV box. Rate and depth of degradation induced by the environment were evaluated by Frequency Sweep Test, which monitors changes in viscoelastic properties of polymers with respect to their molecular structure and their behavior in thermoplastic processes. Degradation process resulted in changes of complex dynamic viscosity, storage and loss modulus, changes in molecular weight and its distribution. UV radiation is intense degradation factors affecting the change in the structure and properties of polymers - the polymer matrix gradually degrades by UV radiation, the viscosity of the composites decreases, the COP is moved to lower angular frequencies with increasing molar mass.**

**Keywords:** polyamide, frequency sweep test, UV degradation, microstructure, glass fibers

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