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PREPARATION OF BLENDS OF POLYAMIDE 6/PE-G-MA/ WASTE SBR

Daniella Bezerra, Divânia Silva, Lízzia Reul, Edcleide Araújo, Ana Cristina Costa,

Engenharia de Materiais, UFCG

daniellacibele@gmail.com

The blends are polymeric materials originating from the mixture of at least two polymers and/or copolymers, without a high degree of chemical reaction between them. Blends of polymers with different physical properties allow better through a combination of synergy with each system component. However, mixing two immiscible polymers is not a simple procedure, because the resulting material blend are hardly processed, extruded or injected, and they can be brittle. One of the agents most often used to improve the interaction between two immiscible polymers is the addition of a third component to the mixture, called a coupling agent, which increases the adhesion between the polymer and improves the mechanical properties of the resulting material. Among the various polymer matrices, polyamide 6 was chosen to develop this work, for being an engineering polymer, some advantages such as ensuring: dimensional stability, good impact resistance when not carved, excellent chemical resistance, high melting temperature, among other. Despite the advantages that polyamide 6 has, it needs to care for their processability, because it is a hygroscopic material and present weakness on impact at low temperatures. To improve its performance has been used with the toughening of polyamide-based materials, elastomers. The SBR (styrene-butadiene copolymer) is considered a general purpose elastomer. It has properties as reasonable resistance to aging, good abrasion resistance and good resistance to sea water. Blends of Polyamide 6/PE-g-MA/waste SBR was obtained from mixtures in various proportions, using an internal mixer of type Haake. The objective this work was to obtain blends toughened Polyamide 6/PE-g-MA/waste SBR. The results have been promising.