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## PREPARATION, CHARACTERIZATION AND VALORIZATION OF REGENERATED LOW DENSITY POLYETHYLENE/POLYPROPYLENE BLENDS

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### Abstract

The aim of this work is to study the valorisation of two regenerated low density polyethylene (LDPE) coming from dirty wastes by blending with polypropylene (PP) in presence of compatibilizer. The first step was the determination of the physico-chemical properties of the two regenerated samples (density, melt flow index, water absorption, melting temperature and oxidation index) and the mechanical properties (tensile and shore D hardness).

The second step was the characterization of the physical (density, water absorption) and mechanical properties (tensile and shore D hardness) of LDPE / PP blends. In the third and last step, the effect of compatibilizer on the properties of LDPE / PP blends in the same proportion was considered. Physical characterization (density, water absorption and morphology analysis by scanning electron microscopy) and mechanical properties were carried out.

The results showed that this kind of blending has contributed considerably in performing properties of regenerated LDPE.

*Key words:* compatibilization, LDPE/PP blends, recycling, valorization

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