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**INVESTIGATION OF PHYSICAL AND MECHANICAL PROPERTIES AND BEHAVIOR OF BLEND OF
POLYPROPYLENE WITH α -OLEFINE COPOLYMERS**

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The main objective of the present work was to study the effect of interaction between commercial PP Homo polymer and metallocene PP based α -Olefin copolymer on crystallization behavior and mechanical properties of their blends.

Two sets of blend samples by using two types of α -Olefin copolymer with the same melt flow index, but varying in co- monomer content were considered.

All blend sample with composition of 80/20, 90/10, 95/5, were prepared by melt blending in a laboratory internal mixer.

The pronounced melt depression of the blend component, was considered as indication of considerable increase in impact strength of the PP while the modulus of the blends showed a positive deviation of mixture law, Due to increased crystallinity of PP, as a result of nucleating action of the α -Olefin copolymer phase since it's Tc is much lower than that PP homo polymer.