



**PROPERTIES, HYDROLYSIS AND BIODEGRADATION OF COMPATIBILIZED P(L)LA/PCL BLENDS  
FOR OUT-DOOR APPLICATIONS**

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The compatibilization of poly-L-(lactide) (P(L)LA) / Poly-epsilon-caprolactone (PCL) blends was investigated using different reactive agents. Mechanical properties, morphology and crystallinity are reported as a function of compatibilizer type. Structural modifications were analyzed in the melt state by following both  $N^*$  (complex viscosity) and  $G'$  (storage modulus). Since some samples were highly crosslinked, biodegradation tests were run to evaluate the impact of compatibilizers on biodegradation. Besides, water sensitivity was evaluated through 65 °C hygrothermal ageing. Cross-linked P(L)LA samples were found to have a retarded water uptake and impact property decrease. Finally improvement of fragmentation using oxidation catalysts was evaluated and climatic ageing (UV + thermal + hydrolytic) were run in accelerated ageing chambers.