

HDPE COMPOSITES WITH POLY (MALEIC ANHYDRIDE-ALT-1-OCTADECENE)-FUNCTIONALIZED CALCIUM CARBONATE PARTICLES

Catalin Croitoru, Ionut Claudiu Roata, Alexandru Pascu and Elena Manuela Stanciu

Materials Engineering and Welding Department, Transilvania University of Brasov,
Eroilor 29 Str, 500036, Brasov, Romania

In this paper poly (maleic anhydride-alt-1-octadecene) functionalized amorphous and crystalline calcium carbonate has been used as filler for the obtaining of high density polyethylene in loading amounts ranging from 10 to 40% reported to the matrix. The morphology of the composites cross-section was characterized by SEM coupled with EDS and optical microscopy, evidencing an optimum wetting of the filler particles with the polymer phase, XRD and FTIR spectroscopy, evidencing low crystallinities and respectively physical bonding between the filler and the polymeric matrix.