عنوان مقاله:

The Effect of Particle Size and Concentration ATH on Flammability and Mechanical Properties High Density Polyethylene and Ethyl vinyl acetate (HDPE/EVA) Compound

محل انتشار:

پنجمین کنگره بین المللی مهندسی شیمی (سال: 1386)

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نویسندگان:

Emadi - *Chemical Engineering Department, Isfahan University of Technology*

Nori Khorasani - *Chemical Engineering Department, Isfahan University of Technology*

Moheb - *Chemical Engineering Department, Isfahan University of Technology*

خلاصه مقاله:

In this research effect of concentration and particle size on flammability and mechanical properties of high density polyethylene and ethyl vinyl acetate (HDPE/EVA) filled with aluminum trihydrate (ATH) were investigated. Two grades of ATH with particle size 2 and 20 micrometer were used. The level of filler varied from 10 to 60 weight fraction with step of 10. Particle size has no effect on flammability of polyethylene and ATH composites where as increasing weight fraction of ATH increased flame resistance. The results shows elongation at break decrease as weight fraction of ATH increased of 60% by weight, but tensile for tin particle size increased to 40 weight fraction and then decrease and for large particle size decrease with increase weight fraction of ATH. The flow behaviors of compounds were also investigated results show that increasing amount of filler content decrease the melt flow index (MFI). Where as .smaller particles increase the MFI in comparison of particle with large particle size

کلمات کلیدی:

polyethylene, aluminum trihydrate, flame retardant, ATH, ethyl vinyl acetate