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? ˌ ȧ/LDPE c є ʝы Ⱡ ? ? ? ?

1,2, 1,2, 1,2, ? 1,3

1. C ц ₳ ²? " 뻭 й ص? ? ? ? " , 412008;
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ժ₵ Է? ? ? ? ? ? ? ˌ ȧ , ? ? Ƨ (LDPE)Ï 悅 Ö ? , ? ˌ ȧ/LDPEľ? c ℈? ? ? ? ? ? ? ? ˌ o ? ˌ ά ? ? ? ? ? ? ? ? ? ? ? Ƨ (MAH-g-PE) ? Ⱡ (AC) Ը c ы Ե Ÿ ; SEM ˠ쵄? ? ? ? ? ˌ c э ? ? ? ? Ÿ 젏 : ? ? ? ? ? ˌ ά , c є ? ? ? ? ? ˌ (MFI)Оɣ ½ ; MAH-g-PE ά? ? ? ? ? ? ? ? ?? ? ? ? ? ? , c є ? ? ? ? ? ˌ , 京 ɲ Ï15%; PE Ը c є ش , c є ? ? ? ? ? ˌ PE ' Ա伆; AC 뾀 c є ? ? ? ? ? ˌ , AC 5% ' c c Եٺ ; ? ? ? ? ? ? ? ? ˌ , Þ є ? , ? ? ? ? ? ˌ Ï1.5ᶠ , " C ? ˌ

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Processing rheology properties and cell morphology of foamed recycled paperboard fiber/LDPE composites

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Abstract: The foamed recycled corrugated paperboard fiber/low density polyethylene(LDPE) composites were prepared by blending co-rotating extruder with recycled paper fiber and LDPE as the main materials, the compatilizer, lubricant, foaming agent as the additives. The processing rheology properties of above mentioned composites were investigated with industrial melt flow indexer by taking the concentration of recycled paper fiber, compatilizer, lubricant and foaming agent into consideration. And SEM was used to observe the influence of different melt index on cell morphology of foamed composites.The results show that: the melt flow index (MFI) of the composites declines with the increase of the recycled paper fiber concentration; The adding of MAH-g-PE enhances the interaction between the two main phases and the MFI of the composites drops after a ascension with the peak point of about 15%; PE wax performs the best lubricant effect herein and the MFI of the composites increases linearly with the loading of the PE wax; The AC foaming agent promotes the reduction of the MFI of the foamed composites, and the wall slipping effect occurs at the AC concentration beyond 5%; With the increase of MFI, the size of cell increases. When the MFI is 1.5, the size of cell is uniform and medium.

Keywords: recycled paperboard fiber low density polyethylene foaming processing rheology properties cell morphology

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