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Monitoring Dynamic Vulcanisation of EPDM/PE Blends During Extrusion: Effect of Composition and Processing Conditions

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Dynamic vulcanisation of EPDM/PE blends using the resol/SnCl₂ system was studied in a co-rotating twin screw extruder using a series of sampling devices. In order to study the effect of composition and of the processing conditions on chemical development along the extruder and on the mechanical properties of the extrudate material, several recipes were compounded under the same processing conditions and a certain recipe was preparing using different processing conditions. The results showed that both chemical evolution and mechanical properties depend on the composition and processing conditions.