**Format**

Study of the rheological and rheokinetic behaviour of a sulfonated polystyrene system during the curing process

**Corresponding Author name** Mohammed el amine ZENNAKI



**Affiliation:** Laboratory of Organic Electrolytes and Polyelectrolytes Application (LAEPO). Department of Chemistry, Faculty of Sciences, Tlemcen University, Algeria

**Ph. No: +213-556883432**

**Email ID’s: zenamine12@gmail.com**

**WhatsApp No:** For conference updates**+213-556883432**

**Other Authors if any:** Oussama BOURAS, Oussama AMMOUR ,Lahcene TENNOUGA, Brahim BOURAS

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**Abstract**

In this work, we have focused on the recycling of waste expanded polystyrene, which allows us to obtain a new copolymer based on polystyrene. The properties of the obtained copolymer as well as its structure and composition were established by UV-visible, FTIR spectroscopy and TGA analysis. The curing and compaction of the system was studied by dynamic rheology. A rheometer was used to monitor changes in rheological parameters (storage modulus G', loss modulus G", dynamic viscosity η\*) during continuous heating, isothermal ageing and high frequency heat treatment. The results showed that the combination of isothermal ageing, heating and high frequency was a simple strategy for low-temperature curing or shortening the curing time of complex.