



# Viscoelastic Properties of Polycaprolactone Based Polyurethane Networks

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Polyurethane networks (PUNs) based on hyperbranched polyesters (HBP), polycaprolactone (PCL), and isophorone diisocyanate were prepared.<sup>1,2</sup> PUNs consist of different content of hard (HS) and soft segments (SS). The impact of the HBP and the content of the SS on the structure and viscoelastic properties of the prepared PUNs were investigated. XRD analysis confirmed that PUNs with lower SS content were amorphous, while samples with the highest SS content had a certain degree of crystallinity. Viscoelastic properties of PUNs depend on the SS content and used HBP. These PUNs have potential application as coatings.

**Keywords:** polyurethane networks, polycaprolactone, viscoelastic properties

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