Mempelajari pengaruh jenis inisiator, jenis surfaktan dan waktu feeding monomer dari kopolimer butil akrilat-asam metakrilat terhadap kinerja pressure sensitive adhesives berbasis air = Study the effect of varius inisiator, surfactant and feeding time of buthyl acrylate-methacrylic acid copolymer on the performance of water bases pressure sensitive adhessives

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Abstrak

ABSTRAK
Telah dilakukan penelitian pengaruh jenis inisiator, jenis surfaktan dan waktu feeding monomer dari kopolimer Butil akrilat-Asam metakrilat terhadap kinerja pressure sensitive adhesives berbasis air. Proses polimerisasi dilakukan menggunakan teknik seeding melalui polimerisasi radikal bebas pada temperatur reaksi 85±1 oC dengan kecepatan pengadukan 200 rpm.Tipe inisiator divariasi menggunakan APS dan KPS, surfaktan menggunakan LDBS dan SLS serta waktu feeding dibuat 2, 3 dan 4 jam. Parameter polimer PSA seperti : total padatan, viskositas, pH, tegangan permukaan, ukuran partikel, tack, shear dan adhesion diuji. Variasi inisiator, surfaktan dan waktu feeding tidak mempengaruhi total padatan, viskositas, pH dan tegangan permukaan polimer PSA. Efek variasi inisiator, surfaktan dan waktu feeding monomer mempengaruhi ukuran dan distribusi ukuran partikel dimana ukuran partikel paling kecil diperoleh dari kombinasi antara inisiator KPS, surfaktan SLS dan waktu feeding 3 jam. Sedangkan kinerja secara keseluruhan dari polimer PSA didapat dari kombinasi antara inisiator APS, surfaktan LDBS dan waktu feeding 2 jam dengan parameter tack : 4 cm, shear : 18 menit dan adhesion : 6,56 N
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ABSTRACT
A research has been conducted to investigate the effect of various initiator, surfactant and feeding time of Buthyl acrylate-Methacrylic acid copolymer on the performance of water based pressure sensitive adhesives. Polymerization was done by seeding technique through free radical polymerization at the reaction temperature 85±1 oC and the speed of agitation 200 rpm. Initiator was varied by using Ammonium persulfate and Potassium persulfate, surfactant using LDBS and SLS then feeding time was made in 2, 3 and 4 hours. The parameter of PSA polymer i.e solid content, viscosity, pH, surface tension, particle size, tack, shear and adhesion were tested. The variation of initiator, surfactant and feeding time did not effected solid content, viscosity, pH and surface tension of PSA polymer. Variation of initiator, surfactant and feeding time influenced particle size and distribution particle size where the smallest particle size were achieved by

combination initiator Potassium persulfate, surfactant SLS and feeding time of monomer 3 hours. Overall, the performance of PSA polymer was achieved by combination initiator Ammonium persulfate, surfactant LDBS and feeding time of monomer 2 hours with parameters tack: 4 cm, shear: 18 minutes and adhesion: 6,56 N.