

Pembuatan gemuk bio foodgrade menggunakan thickner sabun aluminium kompleks

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Abstrak

Pada penelitian ini dibuat gemuk bio NLGI 2 food grade menggunakan base oil Epoksida RBDPO (Refined Bleached Deodorized Palm Oil) dan pengental sabun aluminium kompleks (Al-stearat dan Al-benzoat) yang komposisinya divariasikan. Gemuk dibuat dengan metode - saponifikasi dua tahap - pada reaktor batch tertutup, dilanjutkan pendinginan, kemudian dihomogenisasi. Gemuk yang terbentuk diuji nilai konsistensi, dropping point serta ketahanan aus dengan four ball test. Gemuk bio aluminium kompleks terbaik yang dihasilkan memiliki dropping point 218_C, diperoleh pada jumlah Al-Stearat 20% wt serta persen mol asam benzoat/ asam stearat 0.5%. Gemuk ini memiliki tackiness yang baik sehingga pada four ball test, jumlah keausannya sangat kecil.

.....The focus in this study is synthesis of bio food grade grease with NLGI 2 using Epoxies of RBDPO (Refined Bleached Deodorized Palm Oil) as the base oil and aluminium complex soap (Al-stearic and Al-benzoic) as the thickener in the various compositions. Grease is made using 'two stages saponification' in the closed batch reactor, continue with cooling and homogenization. The consistence, dropping point and anti wear of grease produced is tested. The best quality grease produced has dropping point 218_C, obtained at 20% wt Al-stearic composition and 0.5% mol benzoic acid/ stearic acid. This grease has good tackiness properties showed from the very small wear value in the four ball test.