

***Effect of Epoxy Rubber Seeds and Palm Shells on Mechanism Properties
In the Manufacture of Vulcanized Radiator Seals Four Wheel Vehicle***

by

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ABSTRACT

Radiator seals are one form of diversification of finished rubber products used in four-wheeled vehicles. Radiator seals contain natural rubber seeds and palm shells whose composition affects the breaking stress and strain tests. Natural rubber seeds are the main ingredient that is always used in the manufacture of rubber finished goods. However, natural rubber seeds cannot be used alone for the manufacture of rubber finished goods, so the manufacture of rubber finished goods requires the addition of additives so that the rubber compound can be processed and vulcanized properly to improve the properties of the rubber compound to be made rubber finished goods. This study aims to determine the effect of rubber seeds and palm kernel shell activated charcoal on the mechanical properties of the radiator cap seal vulcanizate and get the best concentration to prevent hardening of the radiator cap seal rubber. Epoxy rubber seed material will be mixed with palm kernel shell charcoal filler material, then testing the breaking stress and strain values with variations of P1A1, P1A2, P1A3, P2A1, P2A2, P2A3, and P3A1, P3A2, P3A3. Testing P1 + A1 (The highest breaking stress value) which produces a breaking stress of 0.980665Mpa, while the results in the P2 + A1 sample (The lowest stress value) whose value is 0.392266 Mpa, and other variant samples (Medium stress value) produce values above 0.4 Mpa. Meanwhile, testing P1+A1 (The highest strain value) produced a strain value of 0.05 while the results of P1+A2, P2+A2, and P3+A2 (The lowest strain value) whose strain value was 0.02, other variant samples (Medium strain value) produced a strain value of 0.3 Mpa.