Pengaruh *Filler* Jenis Karbon Hitam Terhadap Sifat Mekanik Kompon Karet Sebagai Bahan Baku Proses Pembuatan Karet *O'Ring* Studi Kasus di PT. Fuboru Indonesia (*Effect of Carbon Black Filler type Against Mechanical Properties of Rubber Compound as Raw Material Production Process O'Ring Rubber Case Study in PT. Fuboru Indonesia*)

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ABSTRACT

This study aims to determine the effect of filler on mechanical properties of materials rubber compound for the manufacture of rubber O'ring and classify the test object rubber compound resistant to the type of impact (TI) or resistant oil (TO). The research approach used in this study is an experimental research. Specimens used in this study there are two types of compound A and compound B with a variety of different filler. The test used in this study is to test the hardness, swelling test, test reflection spring and compression set test. The results showed that the effect of the filler carbon black N660 on mechanical properties of rubber compound that is the nature of the springs rebound and compression set, Effect of filler carbon black N550 on mechanical properties of rubber compound that is at its violent nature, the effect of the filler carbon black N330 on mechanical properties of rubber compound that is at oil resistance properties. The results of the effect of variation filler when seen from the value of compound A hardness test according to the standard compound impact resistance with a standard range of 65-70 shore A and compound B according to the standard oil-resistant compound with a standard range of 70 ± 5 shore A. Then based test with a standard compression set percentage thickness of less than 40%, with a standard spring testing reflectance of more than 40%, and a swelling test with the standard range of ± 5%, compound A and compound B according to the standard compound impact resistant and oil resistant.

Keywords: Mechanical properties of rubber compounds, filler carbon black, impact resistant, oil resistant.