NBR molded parts for oil seal
Replacement of carbon black
Siliceous Earth

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Carbon blacks are frequently selected as (functional) fillers when dealing with oil-resistant NBR mixtures for sealing parts – whether in mechanical engineering or in the automobile. If you look at the mixture composition, then an inactive carbon black such as the thermal black N990 often serves to fine tune the mixture in order to be able to better or even simply meet the requirements for these kinds of sealing parts, e.g. as found in ASTM D2000. Because the price of carbon black is subject to considerable fluctuations depending on the fossil raw materials and the long-term price indicates an upward trend, an alternative – one more cost-effective as possible – would be preferable. For this reason, this article deals with the replacement of N990 by Neuburg Siliceous Earth variants and examines to what extent they are suitable as a replacement material without having to make compromises with regards to the fulfillment of standard requirements. In particular, this article will touch upon the changes to mechanical properties and those of the media resistance. To summarize, it can be stated that thermal black N990 can be replaced with various siliceous earth products and that this may even also allow further adaptation and/or cost optimization.

Carbon blacks are often selected as (functional) fillers, when it comes to oil resistant NBR compounds for sealing parts be it in mechanical engineering or automotive. When considering the compound composition, an inactive carbon black, such as the thermal black N990, often is responsible for the fine tuning of the mixture and to better meet or meet at all the requirements for such sealing parts, as they are stated exemplarily in the ASTM D2000. Since the price for carbon black strongly fluctuates depending on fossil raw materials and in the long term the price is expected to rise, a possible cost-effective alternative would be desirable. Therefore, this article focuses on replacing N990 with Neuburg Siliceous Earth variants and examines to what extent these substances are suitable as a replacement material without impeding to fulfil the standard requirements. In particular, changes of mechanical properties and of chemical resistance are discussed. In summary it can be noted that thermal black N990 can be exchanged with various siliceous earth products, and the latter even