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AGEING PROPERTIES OF NATURAL RUBBER WITH CASHEW NUT SHELL LIQUID INCORPORATED INTO LATEX

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It has been reported that cashew nut shell liquid (CNSL) is an antioxidant for natural rubber (NR) in sulphur cured vulcanizates, when CNSL is added as a compounding ingredient on a two roll mill.

This paper reports investigations on ageing properties of the raw rubber and the vulcanizates where the CNSL is incorporated at the latex stage. The results show that CNSL is not an antioxidant for raw rubber. This observation confirms a postulate reported in literature, that CNSL can act as an antioxidant only in the presence of sulphur, via the formation of phenolic sulphides in situ during vulcanization.

The results also show that the activity of CNSL in sulphur cured vulcanizates remains the same whether it is added to dry rubber or mixed with rubber at the latex stage, but there are practical advantages in adding CNSL to latex.