

Thermal stability of commercial peroxides for cross linking of caoutchouc mixtures

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For a cross linking process of recent rubber compounds i. a. peroxides are used. 19 different product samples of five different product groups are characterized by Differential Scanning Calorimetry (DSC) and Thermogravimetry (TG) to find out the most suitable commercial peroxide for the favored process. The observed thermal stability, particular the decomposition temperature as well as the transformation enthalpy, vary significantly inside a product group (figure). In case of some products irreversible endothermic transformations are detected. These are without effect on the relevant decomposition of peroxide.

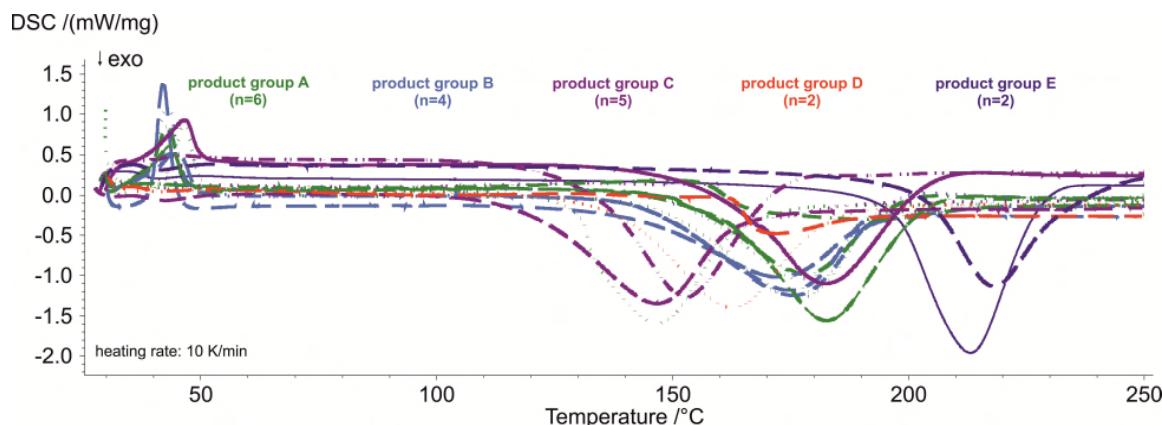


Figure: DSC curves of commercial peroxides. Weighted sample, ~3,5 mg

The results are helpful to select the most suitable peroxide for the production of special rubbers. Further the results offer to compare commercial peroxides of different distributors concerning production effectivity and price.