

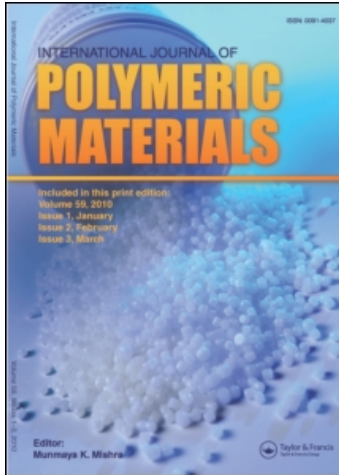
This article was downloaded by:

On: 23 January 2011

Access details: *Access Details: Free Access*

Publisher *Taylor & Francis*

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



## International Journal of Polymeric Materials

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title~content=t713647664>

### Letter to the Editor

Z. Rigbi

To cite this Article Rigbi, Z.(1980) 'Letter to the Editor', International Journal of Polymeric Materials, 8: 1, 81

To link to this Article: DOI: 10.1080/00914038008077936

URL: <http://dx.doi.org/10.1080/00914038008077936>

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.informaworld.com/terms-and-conditions-of-access.pdf>

This article may be used for research, teaching and private study purposes. Any substantial or systematic reproduction, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

## Letter to the Editor

Sir

The results of the thermal analysis presented by Lezhnev and associates<sup>1</sup> would have considerable bearing on the elucidation of the interaction between carbon black and elastomers if they could be confirmed and extended. These workers demonstrated that upon heating, mixtures of carbon black and SBR elastomer showed a marked exotherm at temperatures about 100°C. As neither the reversibility of this phenomenon on cooling, nor its appearance on heating a second time were mentioned, attempts were made to extend the study of this phenomenon.

Experiments were undertaken by the writer on a mill-mixed SBR/reinforcing black compound using a Du Pont 990 instrument, but surprisingly, no exotherm was observed. At his request, Dr. Goursot of the Centre de Recherches sur la Physico-Chimie des Surfaces Solides, Mulhouse, tried to observe the effect on a Perkin-Elmer DSC-2 at a variety of heating and cooling rates, but failed. A further attempt was made on a Du Pont 990 at the Décines Laboratory of Rhône-Poulenc, S.A. in which three mixes of identical composition were studied. One mix consisted of the black, dispersed in a solution of a solution-polymerized SBR, precipitated with methanol and vacuum-dried (A). The second sample was mix A, masticated in a Brabender mixer. The third sample was a mix prepared in a Brabender from dry components.

In none of the samples was the exotherm observed, and the behaviour of all three was substantially identical.

Z. RIGBI

### Reference

1. N. N. Lezhnev, B. Ya. Yamposlkii, N. M. Lyalina, V. P. Dreving and L. I. Kogotkova, *Dokl. Akad. Nauk. SSSR*, **160**, 861 (1965) (in English translation).