

Pollution



The British
Plastics
Federation

47 Piccadilly, London W1V 0DN

Our ref RFC/LJM/1112

Your ref

To: All BIBRA Nominated Representatives

14th June, 1972

Dear Member,

PHTHALATES

For the chemical manufacturer and industrial user of phthalates and for the retailer of phthalate-containing products there are signs that an impending problem is developing which may ultimately lead to government action. The problem, as usual, arises from a mixture of rumour and fact, and it is likely that publicity of it will increase in the near future.

*** Enclosed is a précis of data on the subject. It has been suggested that BIBRA should convene a meeting at which the relevant data could be discussed in greater detail, and at which some general conclusions could be reached about any future course of action which may be required.

The most appropriate time for such a meeting seems to be September 1972 and undoubtedly the best venue would be somewhere in central London. I should therefore appreciate if you would reply stating your degree of interest in the subject and whether your organization would be prepared to send a representative to attend such a meeting.

Yours sincerely,

R.F. CRAMPTON.

DSW 588174

STLCOPCB4093510

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Phthalates

Phthalate esters are widely used as plasticizers in a large variety of products ranging from blood transfusion sets to the upholstery of car seats, and including food packaging materials.

In the past the safety of phthalates has been assumed on the basis of orthodox toxicity studies (1,2,3). Some recent concern has been expressed suggesting that this assumption is no longer valid. This concern is based broadly on two types of data. Firstly, the paper by Bower et al. (4) suggested that phthalates were responsible for the production of malformations in newborn rats. This was followed by a paper by Singh et al. (5), the conclusion of which was that a number of phthalates produced an increased incidence of skeletal malformations in newborn rats, a decrease in their body weight, and an increased incidence of death before birth. Although the number of animals used was small, it was suggested that the frequency of such abnormalities depended upon the dose of administered phthalate.

The second type of data comes from a number of different sources. The reported incidence of phthalic acid in deep sea jellyfish, which normally live at a depth of several thousand feet, by workers at the National Institute of Oceanography was surprising (6). It was concluded that this observation was most likely to be explained by the assimilation and storage of phthalic acid by the animal. Phthalates have also been found in heart muscle obtained from abattoirs (7). A report has also appeared implying phthalate toxicity in human patients whose life has been maintained by artificial kidney machines (8). Phthalates have been found in human tissue at the post-mortem of patients who have received blood transfusions (9), and the authors of this report have also demonstrated that phthalates present in the blood can be taken up by the liver. Allegations that phthalates are present in the blood transfusion have been made in various newspaper reports (10,11).

On the commercial side the problem has been to some extent aggravated by rumours that one large automobile manufacturer in the USA has discontinued the use of PVC materials containing phthalates. However, other information suggests that the manufacturer in question has replaced di-octyl phthalates by less volatile esters of phthalic acid.

Clearly there is likely to be an increasing pressure on governments to issue statements on this problem, and it is therefore of importance that any such statements should be based upon data and rational thought rather than emotional reactions to the pressures of publicity media.

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