

Dimethyl Fumarate in furniture and footwear

By Tim Yeomans PhD

Since 2009 a temporary dimethyl fumarate (DMF) import ban for all member states of the EU has been in place following reports that DMF in leather sofas was associated with severe skin reactions. DMF is an anti-fungal/biocidal agent and is known to cause physical reactions like dermatitis or allergies. It was banned from the European market in consumer products as of 1st May 2009. Products already on the market containing more than 0.1 mg/kg had to be removed from shelves as they were not permitted to be sold from May 1st 2009. Member states of the EU are responsible for ensuring that products containing DMF are prohibited from being placed or made available on the market. This temporary ban ends on March 15th 2012, however the Risk Assessment and the Socio-Economic Analysis Committees of the European Chemicals Agency recently supported a French proposal to ban the use of the DMF in consumer articles. The conclusion of the Risk Assessment Committee was that a permanent ban on DMF was warranted due to the serious risk posed to EU consumers.

DMF is a fine white crystalline powder, which is used in consumer products to prevent the growth of fungi and mold species. DMF is most often used in sachets or pouches fixed inside furniture or added to footwear boxes. The substance evaporates and impregnates the product, protecting it from molds. Due to this mode of action, consumers are also affected due to the evaporation of DMF through the clothes and onto the skin where it can cause painful contact dermatitis. The symptoms of contact dermatitis include itching, irritation, redness, and burns. Inhalation irritancy has also been reported, as has eye irritation where contact is made with the eye.

A significant impact of the ban is the obligation to remove products from the market where it is known that the products, or even parts of the product, contain more than 0.1 mg/kg DMF. High risk products are leather shoes and furniture and those products bearing an 'anti-mold' statement. Soft toys containing DMF have also featured on the EU's rapid alert system for dangerous consumer products (RAPEX). It is important to note that this legislation covers all types of products and is not simply restricted to footwear, furniture and toys.



Profile

Tim graduated from the Institute of Technology Carlow with a Degree in Industrial Biology, and completed his Ph.D. in Microbiology in UCC which focused on pathogenic fungi. Tim was subsequently employed as a post-doctoral scientist in the Microbiology Research Unit in the Dublin Dental School and Hospital investigating pathogenic yeast species. Tim then joined **airmid healthgroup Ltd.**



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