



EU dimethyl fumarate (DMF)

ban continues

欧盟继续禁用富马酸二甲酯 (DMF)

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The 1-year ban on the use of dimethyl fumarate (DMF) in all products for the EU market has recently been extended for another 12 months to 15 March 2011 by the Commission Decision 2010/153/EU.

DMF has been widely used as an anti-moulding agent for leather goods such as footwear and sofas during storage and transportation. It is a white crystalline powder and is usually contained in small sachets which are placed inside the furniture or footwear boxes.

DMF works by impregnating the products through sublimation (a substance going from solid to gas without the liquid state) in hot conditions. Since it is a potent

近期欧盟委员会 2010/153/EU 决议确定，将为期一年、在欧盟市场内的所有产品中禁止使用富马酸二甲酯 (DMF) 的禁令再行延长 12 个月至 2011 年 3 月 15 日。

DMF 被广泛用作鞋、沙发等皮革制品在仓储和运输过程中的防霉剂。它是一种白色晶体状粉末，通常是以小包形或放置於家具上或鞋盒中。

DMF 可在高温条件下通过升华（物质不经过液态，直接从固态变成气态的过程）渗透到制品内部。DMF 是一种烈性致敏物质，可以渗透到衣物内，皮肤只要接触到很少剂量，就能导致严重和

sensitiser, DMF can penetrate through clothing to cause severe and painful dermatitis upon skin contact with just a minute quantity. Ironically, the sublimation property that makes DMF an effective anti-moulding agent is also what makes it particularly prone to cross-contaminating other materials.

The DMF problem was originally reported in the EU in 2008 for imported leather sofas, however, the range of products found with this chemical has since included footwear, children's hat, toys, helmet and jeans, some of them made with materials, both natural and synthetic, other than leather. Footwear made with leather materials are particularly prone to be found with DMF present – to date, the EU's rapid alert system for dangerous consumer products (RAPEX) has reported over 150 cases involving DMF in leather footwear, out of a total of less than 170 DMF cases in total.

Details of the DMF Ban

The DMF ban applies to all products on the EU market, including those imported from outside of the EU. All products containing DMF at concentration greater than 0.1 mg/kg of the weight of the product or part of the product:

- (1) will be prohibited from being placed or made available on the EU market;
- (2) already placed or made available on the market are to be withdrawn from the market and recalled from consumers, and that consumers are to be adequately informed of the risk posed by such products.

The current ban on DMF is an extension of the temporary measure put in place last year and it will end on 15 March 2011. However, France has indicated interest in banning DMF on a permanent basis by putting it in the Annex XVII of the REACH regulation.

非常痛楚的皮肤炎。具有讽刺意味的是，使 DMF 成为一种有效防霉剂的升华特性同样会造成其易于对其他材料产生交叉污染。

DMF 的问题最初是在 2008 年进口欧盟的沙发中发生的，不过，被发现含有这种化学物质的产品范围已涵盖到鞋类、儿童帽、玩具、头盔和牛仔服，其中有些产品的材料是天然和合成材料，而非皮革。采用皮革制成的鞋中尤其容易发现 DMF 的存在：目前，欧盟的危险性消费品快速警示系统 (RAPEX) 在总共不到 170 件的案例中，已经发现了超过 150 个在皮鞋中含有 DMF 的个案。

DMF 禁令的详细情况

DMF 禁令适用于欧盟市场的所有产品，包括从欧盟之外进口的产品。所有含 DMF 浓度大于 0.1 mg/kg 重量比的产品，或产品部分中：

- (1) 将禁止在欧盟市场上架或出售；
- (2) 已上架或出售的产品必须下架或向消费者召回，并充分告知消费者该产品的危害性。

目前的 DMF 禁令是去年实施的临时措施的延长，并将于 2011 年 3 月 15 日到期。不过，法国已表示有意将其列入 REACH 法规附件 17 中，从而达到永久禁止使用 DMF 的目的。

At present, products found to contain DMF above the limit have been subjected to the following enforcement measures, which can be applied voluntarily by actors in the supply chain or imposed by the authorities:

- imported products rejected by the customs authorities
- seizure of the products by the authorities
- destruction of the remaining products
- withdrawal of products from the market
- recalling products from consumers

目前对发现 DMF 含量超标的产品已实施了下列措施，这些措施可由供应链中的相关方自愿实施或由当局有关部门执行：

- 进口产品被海关拒绝入关
- 产品被当局有关部门没收
- 其余产品予以销毁
- 产品从市场下架
- 产品向消费者召回

Chemical information

Name: Dimethylfumarate (DMF)

IUPAC Name: Dimethyl (*E*)-butenedioate

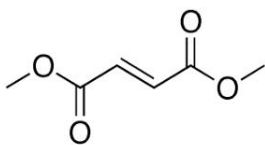
Other names: *trans*-1,2-Ethylenedicarboxylic acid, dimethyl ester; 2-Butenedioic acid, dimethyl ester

CAS: 624-49-7

EINECS: 210-849-0

EU classification: Harmful (Xn)

Chemical Structure:



TÜV SÜD has developed a test methodology for analyze and identify dimethyl fumarate (DMF) in a wide range of consumer products for the EU and worldwide markets. The technical knowledge and expertise of the internationally active experts at TÜV SÜD support you in implementing solutions to cope with the new challenges of the new legislations from dimethyl fumarate (DMF) to CPSIA and REACH.

化学物质信息

品名: 富马酸二甲酯 (DMF)

IUPAC 名称: Dimethyl (*E*)-butenedioate

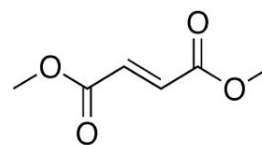
其他名称: 转-1,2-二羧基丙烯酸二甲酯; 2-二羧基丁烯酸二甲酯

CAS: 624-49-7

EINECS: 210-849-0

欧盟分级: 有害 (Xn)

化学结构:



TÜV SÜD 已经开发出了一种分析和识别富马酸二甲酯 (DMF) 的方法，广泛适用于欧盟和全球市场的各类消费品。TÜV SÜD 活跃在全球各地的专家将以他们的技术知识和专长帮助您实施各种解决方案，以应对 CPSIA 和 REACH 关于 DMF 新立法的挑战。

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