

Responses to Consultation on a European Commission proposal to place certain restrictions on the marketing and use of Toluene

Consultation response for the period 10 September 2004 to 3 December 2004.

Introduction and background

The European Commission adopted a Proposal in April 2004 to introduce a Directive to place certain restrictions on the marketing and use of toluene. The proposal is summarised as follows:

- Toluene or adhesives and spray paints containing in excess of 0.1% toluene, will be prohibited from being placed on the market for sale to the general public; and

This proposal arose because of concerns about:

- Acute toxicity and eye irritation in consumers when exposed to toluene vapours as a consequence of repeated use of certain adhesives and spray paints containing this substance; and

In the framework of the Existing Substances Regulation (EEC/793/93), both substances were identified as priority substances for evaluation and control. Risk assessment reports were completed in March 2001 and these concluded that additional measures were needed to provide improved protection from the risks to human health and the environment. It was recommended that action be taken to reduce these risks under the framework of the Marketing and Use Directive (76/769/EEC).

Consultation

A major consultation exercise was carried out in September 2004 involving approaches to around 270 organisations including relevant trade associations, manufacturers, local and national government, consumer bodies and others with a possible interest in either substance. Their responses are summarised below.

TOLUENE

Feedback from an initial consultation exercise involving the main trade bodies and carried out in May 2004 elicited few responses.

Ten responses were received from the September consultation exercise. These were from:

The British Adhesives and Solvents Association (BASA)
The British Aerosol Manufacturers' Association (BAMA)
Adhesive Tape Manufacturers' Association (ATMA)
The Society of Motor Manufacturers and Traders Limited (SMMT)
The Society for the Prevention of Solvent and Volatile Substance Abuse (Re-Solv)
The Transport and General Workers Union (T&G)
St George's Hospital Medical School (SGHMS)
Scottish Environment Protection Agency (SEPA)
Bostik Findley Ltd (Bostik)
Mr P W Munn, B.Sc, CSci, C.Chem, MRSC, FTSC

Comments made

1. Toluene is used as a co-solvent in many proprietary products and has a unique character based on its combination of high solvency and low polarity. Residual quantities significantly enhance adhesion. It is used in the adhesive industry especially within contact and gun-applied adhesives used by the building trade.

2. Industry have argued that the proposal is likely to have a wider impact than intended because of the difficulty of differentiating between retail and trade sales. They also point out that it is not possible to differentiate between use by a tradesman of a product containing toluene which exceeds the proposed limit, as his trade, and his personal use as a member of the public. Furthermore, the proposal makes no distinction between the application of the various products that contain toluene, nor the volume of vapour emitted from each when used, with considerably more volatile vapour emitted from a spray-applied product used over a large area (ie paint film) compared to a cartridge adhesive, in paste form, applied to a small area in thin strips. Both types of product may contain similar levels of toluene but have significantly different levels of air borne vapour concentration when used.

3. Toluene is a naturally occurring component in some products and is also present as an impurity in many other refined raw materials. As a result, the various trace sources could give rise to toluene being present in the final formulation at more than 0.1% - much higher than the 0.1% limit proposed under the Directive. It has been proposed that the limit be altered to 1.0% by mass, alternatively, that the limit be raised to 0.25% with a declaration to reduce it to 0.1% after a couple of years to allow for checking of ingredients and stock reduction and enable formulators to obtain alternative sources and provide a reasonable timeframe to complete developmental work on suitable alternatives. Toluene is not generally present as an ingredient in spray products sold to the general public, but if present, it would only be as a result of impurities in the various ingredients such as xylene.

4. For those companies selling to both the USA and other markets including Europe there is a further issue. In the USA, formulators must use toluene aerosol paint formulations due to the existence of the California MIR (Maximum Incremental Reactivity) air quality regulation regarding spray paint. In the 1990's USA manufacturers converted from xylene-containing formulations to toluene-containing formulations to meet these requirements. The logistics of selling into a world-wide market means that most USA companies (some USA parents trade in Europe) work with 'old' xylene-containing formulations to avoid maintaining two different formula databases and two raw material storage container systems. However, no USA parent trading in the UK market has expressed particular concern with the proposal.

5. The characteristics of toluene most prized in the industry are its solvent power, its evaporation rate and its cost. It is believed there are no alternatives available with these same characteristics.

6. The point has also been made that the volume of toluene-containing paints by professionals far exceeds the volume of such paints used by the public and that these could be reformulated but not without adversely affecting its properties.

7. Toluene is probably the most important solvent used by the coating industry. Its removal is, therefore, likely to have a very damaging effect on the coating industry.

8. The motor industry generates a manufacturing turnover approaching £45 billion and supports some 850,000 jobs. Interest centres on some formulations used in aerosol paints for the automotive aftermarket repair, most likely clearcoat formulations which have a toluene content in the range of 10-20%. However, the industry have reported no concerns over the proposal.

9. As EU law currently stands, products containing less than 12.5% toluene are not classified as harmful. Therefore, a move to a level of less than 0.1% within a short timespan would have a significant impact on the adhesives industry. Reformulation of product with possible inferior performance would, furthermore, disappoint the DIY-user. The industry argue that a more consistent approach would be to include brushable paints which may contain toluene alongside adhesives and spray paints containing toluene, or to align both sprayable adhesive and paints but exclude brushable products. They have also queried why cleaners/thinners which may be 100% toluene, are excluded from the proposal.

10. Under current European legislation, products containing less than 12.5% toluene are not classified as harmful and, therefore, the severity of the proposal has been questioned. A suggested approach is to control the use of toluene through labelling, through the introduction of relevant risk phrases and markings on packaging and labels making the hazards clear to all users.

11. Greatest consumption and release to the atmosphere of toluene vapour arises from the consumption of aromatic hydrocarbons in motor spirit.

12. There have been 2,050 volatile substance abuse related deaths since 1971. Of these, 340 have been associated with solvent based adhesives, 8 deaths were associated with spray paints and 2 with aerosol adhesives. The majority of these deaths occur from glue sniffing. Butane gas cigarette lighter refills and aerosols make up the largest proportion of the remaining deaths. In recent years there have been fewer deaths to a low of 3% of all VSA deaths in 2002 – the last year for which figures are available. Deaths associated with volatile substance abuse have been monitored for the past 20 years. Such data is coded for chemicals abuse amongst other factors, which allows extraction of the number of deaths associated with toluene, either as a primary or secondary substance abused.

13. The table below shows figures at five year intervals beginning in 1983:

VSA Deaths associated with Toluene

Year	Toluene	All Deaths	% of all VSA deaths
1983	23	82	28
1987	21	115	18
1992	10	85	12
1997	7	78	9
2002	2	63	3

14. It has been pointed out that replacement of toluene in such products with other potentially dangerous substitutes could have equally harmful effects depending on the formulations used.

15. There is strong support from environmentalists to implement the provisions of the proposed Directive in full in preference to reliance on a voluntary code.

16. The trade union movement are fully supportive of the proposal.

End

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