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REPORT

drawn up on behalf of the Committee on the Environment,
Public Health and Consumer Protection

on indoor pollution

Rapporteur: Miss Gloria HOOPER

PE 89.477/fin.

English Edition

At its sitting of 21 January 1982 and 14 February 1982, the European Parliament referred the motion for a resolution tabled by Mrs Ann CLWYD on indoor pollution and its effects on health (Doc. 1-907/81) and the motion for a resolution tabled by Mrs VAN HEMELDONCK, Mr COLLINS and Mrs WEBER on the use of urea formaldehyde foam for house insulation (Doc. 1-1043/82) pursuant to Rule 47 of the Rules of Procedure to the Committee on the Environment, Public Health and Consumer Protection as the committee responsible.

At its meeting of 24 February 1983 the Committee on the Environment, Public Health and Consumer Protection decided to draw up a report and appointed Miss HOOPER rapporteur.

The Committee considered the draft report at its meeting of 18 April 1984. At this meeting it adopted the motion for a resolution as a whole unanimously.

The following took part in the vote: Mr COLLINS, Chairman; Miss HOOPER, rapporteur; Mr BERNARD (deputizing for Mr Bombard), Mr CERAVOLO (deputizing for Mr SPINELLI); Mr ENRIGHT (deputizing for Mrs Weber); Mr JOHNSON; Mrs LENTZ-CORNETTE, Mr REMILLY; Mrs SCHLEICHER; Mr VERONESI (deputizing for Mrs Squarcialupi); Mr VERROKEN (deputizing for Mr ALBER).

The Committee decided to request the application of Rule 34 of the Rules of Procedure.

The report was submitted on 4 May 1984.

The deadline for the tabling of amendments to this report appears in the draft agenda for the part-session at which it will be debated.

C O N T E N T S

	<u>Page</u>
A. MOTION FOR A RESOLUTION	5
B. EXPLANATORY STATEMENT	7
ANNEX I : Motion for a resolution (Doc. 1-907/81)	
ANNEX II: Motion for a resolution (Doc. 1-1043/82)	
ANNEX III: Motion for a resolution (Doc. 1-1369/83)	
ANNEX IV: Motion for a resolution (Doc. 1-1455/83)	

The Committee on the Environment, Public Health and Consumer Protection hereby submits to the European Parliament the following motion for a resolution together with explanatory statement

MOTION FOR A RESOLUTION

on indoor pollution

The European Parliament,

- having regard to the motion for a resolution on indoor pollution and its effects on health (Doc. 1-907/81),
 - having regard to the motion for a resolution on the use of urea formaldehyde foam for house insulation (Doc. 1-1043/82),
 - having regard to the motion for a resolution on the use of formaldehyde (Doc. 1-1369/83),
 - having regard to the motion for a resolution on the use of man-made mineral fibres (Doc. 1-1455/83),
 - having regard to the report of the Committee on the Environment, Public Health and Consumer Protection (Doc. 1-241/84),
- A. Noting that more and more absenteeism from work is due to respiratory tract infections and allergies which can be traced to mechanical ventilation systems;
- B. Whereas the illness known as "humidifier fever" is increasingly being recognized by the medical profession;
- C. Whereas measures should also be taken to combat indoor pollution arising from other sources such as insulation materials;
- D. Whereas Canada and the United States have already banned the use of urea formaldehyde foam, an insulation material being widely used throughout the Community;
- E. Considering that other insulation materials such as man-made mineral fibres may also be health hazards;

1. Believes that the increasing use of air-conditioning systems in many modern buildings has resulted in health problems which can be directly attributed to such systems and that action should be taken in this field;
2. Considers that the Commission should examine the problem within the context of existing research programmes such as the sectoral research and development programme in the field of environment (environmental protection and climatology) - indirect and concerted action - 1981-1985;
3. Notes that the Commission is already examining the effect on indoor air quality of pollutants such as formaldehyde;
4. Calls on the Commission, in view of widespread public disquiet about the possible carcinogenic effects of formaldehyde, to give priority to research on this pollutant, and, in particular, to make proposals covering the use of urea formaldehyde foam in house insulation;
5. Further calls on the Commission to include in its studies on indoor air quality the study of the potential health risks of the use of man-made mineral fibres in insulation;
6. Instructs its President to forward this resolution to the Commission and Council.

EXPLANATORY STATEMENT

1. The Committee on the Environment, Public Health and Consumer Protection has been asked to report on four motions for a resolution, dealing with indoor pollution and the possible hazards from the use of various types of insulation materials. The first, tabled by Mrs Clwyd (Doc. 1-907/81) refers mainly to those illnesses which can be traced to air-conditioning systems. The second, tabled by Mrs Van Hemeldonck, Mr Collins and Mrs Weber (Doc. 1-1043/82) refers to potential health risks involved in the use of urea formaldehyde foam in insulation. The motion for a resolution on the use of formaldehyde (Doc. 1-1369/83) tabled by Mrs Dury refers to the various uses of formaldehyde, including its use for insulating materials, and the motion for a resolution on the use of man-made mineral fibres (Doc. 1-1455/83) tabled by Mr Key deals with the use of such fibres for the insulation of buildings.

Health problems attributed to mechanical ventilation systems

2. It is now widely accepted that "humidifier fever", sometimes known as "Monday morning sickness" can be traced to air-conditioning systems. Bacteria taken in from the air develop within the humidifier and are then recirculated through the air-conditioning system.

3. Humidifier fever is a condition similar to allergy in that foreign bodies are inhaled and stimulate the production of anti-bodies. The more foreign material inhaled the more complexes are formed which then spread through the body and produce various symptoms such as muscular pains, headaches, lethargy and fever - hence the term humidifier fever. Most work on the subject accepts that micro-organisms growing within humidifiers are responsible for the disease. Many other symptoms can be attributed to the same cause, e.g. cough, eye sensitivity, breathing problems.

4. Clearly the larger the buildings and the ventilation systems the greater the risks to those working. Industry has come to accept that much absenteeism is due to illnesses arising from mechanical ventilation systems and in many cases particular attention is paid to regular examination and sterilisation of the systems. Chemical biocides are of particular use for this purpose although their effect usually lasts for only a limited time.

5. Legionnaire's disease, mentioned in the resolution, has been traced to other sources than air-conditioning systems. The micro-organism has been found for example, in water from cooling towers, in a warm polluted river, in a steam turbine condenser as well as in humidifiers. This disease is best dealt with as a separate topic and not in a report on indoor pollution.

6. From the evidence it is quite certain that air-conditioning systems are responsible for quite a number of benign affections of the upper respiratory tract. However, no long-term effects have yet been shown and treatment would seem to lie in prevention. The Commission could be of assistance in drawing up recommendations on the up-keep of mechanical ventilation systems.

Use of urea formaldehyde foam for house insulation

7. Urea formaldehyde foam is one of the most common substances used to insulate cavity walls. It is relatively inexpensive and highly effective in energy conservation, and has been used widely for insulation over the last 20 or so years (cavity walls were only introduced around 1945 in the United Kingdom).

8. In normal application, the inner skin of the cavity should be impervious to any vapour given off during the hardening process of the foam. The vapour, if it escapes, can cause irritation of the respiratory tract, eyes and skin. The other symptoms connected with exposure to the vapour are: nausea, headaches, muscular pain and nose bleeds.

9. Studies are currently under way in various countries on the long-term effects of formaldehyde vapour and it would seem that there is growing evidence of carcinogenicity. Tests on mice and rats have shown cancers occurring at levels of 15 ppm (the current TLV is 2 ppm).

10. The use of urea formaldehyde foam has been banned in Canada (since 1981) and in the United States (since 1982). It has been argued that there are considerable differences between the situation in North America and Europe. In the former continent, many houses are constructed in timber, with wider cavities. Such walls are relatively easily penetrated by formaldehyde vapour and would be totally inappropriate for this type of insulation. In Europe the majority of those houses which have been insulated with urea formaldehyde foam are of traditional double masonry construction, which, provided stringent rules are drawn up regarding the inner skin of the cavities, should not normally allow the vapour to escape.

11. The authors of the resolution on urea formaldehyde foam call for a number of measures to be taken by the Commission, including a ban on the use of the foam "as soon as it has been proved that the product is in fact toxic".

12. Similarly, the motion for a resolution on the use of formaldehyde calls on the Commission to propose a directive on the prohibition of its use for insulation materials.

13. The motion for a resolution on the use of man-made mineral fibres refers to studies that have shown the effects on human health of exposure to such fibres. As in the case of urea formaldehyde foam, the problem is essentially one of ensuring that where such materials have been used for insulation, the areas where the fibres have been used are effectively sealed so there is no danger of the fibres being released into the air.

CONCLUSIONS

14. The Commission has already proposed concerted action on 'indoor air quality and its impact on man' in its proposal for a Council Decision revising the sectoral research and development programme in the field of environment (environmental protection and climatology) - indirect and concerted action - 1981-1985 (COM (83) 539 fin). Various topics are to be examined with respect to a variety of pollutants among which formaldehyde is to be given a certain priority. The proposed action will consider indoor air quality in non-industrial indoor spaces. The Committee on the Environment, Public Health and Consumer Protection has already approved the Commission's proposal under this particular heading and it would seem wise to wait for the results of the programme. However, the committee considers that the Commission should enlarge the scope of its studies to include the industrial environment.

tabled by Mrs Ann Clwyd
pursuant to Rule 47 of the Rules of Procedure
on indoor pollution and its effects on health

The European Parliament,

- noting that evidence is increasing that energy-efficient buildings can be dangerous, preventing not only warmed or cooled air to escape but also pollutants,
- noting that an expert from the World Health Organization claimed recently that indoor pollution is doing as much damage to human health than the outdoor pollution which authorities are fighting against throughout the industrialized world,
- noting that a Swiss Medical Research team found that 1 in 4 absent from work were suffering from respiratory tract infections, such as coughs, colds, sore throats, etc. ..., and concluded that those working in air conditioned areas were most at risk,
- noting the increasing pressure to build energy conserving buildings and to use air conditioning in many modern offices, hospitals, schools and factories,
- noting that the illness of 'humidifier fever' is being increasingly recognized by the medical profession and that Legionnaires Disease has been traced in many cases to the air cooling or air conditioning systems,

CALLS for an investigation and recommendations by the Commission.

tabled by Mrs Van Hemeldonck, Mr Collins and Mrs Weber
pursuant to Rule 47 of the Rules of Procedure
on the use of urea formaldehyde foam for house insulation

The European Parliament

- A. having regard to the fact that increasing numbers of people in the countries of the European Community are trying to insulate their houses and flats in order to keep heating costs down,
 - B. having regard to the fact that urea formaldehyde foam is very widely used as insulation material for housing and for public buildings, it is injected into the cavity walls where it hardens,
 - C. whereas this foam can affect the health of people living in housing insulated with this material,
 - D. whereas cases are known in various countries of the European Community of people being affected by the gases released when the material disintegrates,
 - E. having regard to the fact that urea formaldehyde foam is banned in both Canada (since 1981) and the United States (since 1982),
 - F. having regard to the fact that formaldehyde gas has been scientifically proved to be carcinogenic to rats¹,
1. Asks the Commission to carry out a detailed examination as rapidly as possible of the potential health risks of exposure to formaldehyde;
 2. Asks the Commission to investigate not only the potential short-term dangers but also and above all the long-term ones;
 3. Asks the Commission to examine whether the concentration of formaldehyde is dependent on temperature fluctuations, humidity changes and seasonal and climatic variations;
 4. Asks the Commission to ban the use of urea formaldehyde as soon as it has been proved that the product is in fact toxic;
 5. Instructs its President to forward this resolution to the Commission and the Council and the governments and parliaments of the Member States.

¹ See for example Formaldehyde, IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man, Vol. 29, pp. 345-375.

tabled by Mrs Dury
pursuant to Rule 47 of the Rules of Procedure
on the use of formaldehyde

The European Parliament,

- A. having regard to the use of formaldehyde in a wide range of industrial products and everyday consumer goods (medicaments, disinfectants, shoe polishes, tobacco, shampoos, etc.),
- B. having particular regard to its use in the manufacture of insulating foam and furniture made of chipboard or fibreboard,
- C. whereas the Community has to date taken no measures designed to prohibit or at the very least restrict the use of this substance,
- D. having regard to the studies conducted by the US National Academy of Science,
- E. noting that the concentration of formaldehyde gas can be a danger to health which may ultimately lead to death,

Calls on the Commission of the European Communities to propose to the Council a directive on the prohibition of the use of formaldehyde for insulating materials used in all public or private premises, homes, hospitals, schools, mobile homes, caravans, etc.

tabled by Mr Key

pursuant to Rule 47 of the Rules of Procedure

on the use of man-made mineral fibres

The European Parliament

- A. having regard to the fact that increasing numbers of flats, houses, commercial, industrial and public buildings in the European Community are being insulated to reduce heating costs,
- B. having regard to the fact that man-made mineral fibres (glass and rock fibre) are very widely used for the insulation of such buildings by installation into the cavities of walls and into roof spaces,
- C. whereas it has been shown that man-made mineral fibre can affect the health of those exposed to it by causing irritation and itching of the skin leading to possible permanent dermatitis and eye irritation,¹
- D. having regard to the fact that unless areas in a building containing man-made fibres are effectively sealed, the fibre can enter the occupied part of the building during installation and possibly thereafter,²
- E. having regard to the fact that man-made mineral fibres have been scientifically proved to be carcinogenic to humans and rats,³

1. Asks the Commission to carry out a detailed examination as rapidly as possible of the potential health risks of man-made mineral fibre when installed in the walls and roof spaces of buildings for insulation purposes;
2. Asks the Commission to investigate not only the potential short term dangers but, also and above all the long term ones;
3. Asks the Commission to examine the extent to which man-made mineral fibres enter the occupied areas of buildings both during and after installation;
4. Asks the Commission to ban the use of man-made mineral fibres for cavity wall and roof space insulation as soon as the materials are found to be a hazard to health;
5. Instructs its President to forward this resolution to the Commission and the Council and the governments and parliaments of the member states.

¹Plastics and Rubber Weekly, 24/31 October 1981

²Lancashire Evening Post, 9 July 1983
Leyland Guardian, Lancashire, 14 July 1983

³British Journal of Industrial Medicine, 1982:39:45-53. Mortality patterns of rock and slag mineral wool production workers: an epidemiological and environmental study, C F Robinson, J M Dement, G O Ness and R J Waxweilles.