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## **Trade Union Conference on Organic Solvents and Water Based Paints**

**4 November – 5 November 2004 in Copenhagen, Denmark**

### **Copenhagen/Vilvorde Declaration on Organic Solvents and Water Based Paints**

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In the year 2004, as part of the European Health and Safety Week “Building in safety”, the Danish Painters’ Union held an experts’ conference on organic solvents and water based paints. Participating were some 40 representatives of trade unions from 10 European countries<sup>1</sup>, the Nordic Federation of Building and Wood Workers (NFBWW) and the European Federation of Building and Wood Workers (EFBWW). Also participating were a Member of the European Parliament and representatives of research institutions and governments.

#### The aim of the conference was to

- Make an appraisal of the discussion on organic solvents within the trade of painting
- Exchange experiences on occupational health
- Assess the need of European regulation on the protection of workers being exposed to organic solvents

#### Out put of the conference

The conference presentations and discussions showed, that for a long time the organic solvents have been known as harmful to the workers. Unfortunately, several countries are not aware or do not recognize all the harmful effects of organic solvents, including the OPS (Organic Psycho Syndrome).

Still painters in Europe are being exposed to organic solvents. In a number of European countries it is common to use paints based on organic solvents. The European Deco Paint Directive (2004/42/CE) will in the future reduce the amount of solvents in paints, but still there will be plenty of products based on high contents of solvents. To say it short, the conference showed, that organic solvent based paints are still a serious problem for painters in the construction sector and that there are no general indications, that the problems are going to be solved. On top of this, the conference showed, that painters are at risks for heavily exposure to organic solvents, for instance floor treatment and painting steel constructions.

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<sup>1</sup> Countries: Denmark, Norway, Sweden, Finland, Estonia, Lithuania, Germany, Austria, The Netherlands and Belgium.

Several countries have succeeded in improving the use of water based paints, as well as succeeded in making rules reducing the use of paints based on organic solvents. The paint technology is nowadays so advanced, that there generally speaking are no disadvantages in the use of water based paints. Replacement of solvent based paints with water based paints is a straightforward way to improve the painters' health.

A general conclusion of the conference was, that organic solvents is a mutual European problem, which needs to be solved by a mutual European solution.

The conference confirmed the

- IFBWW declaration on organic solvents, 1996, see annex 1
- EFBWW organic solvents policy, 2002, see annex 2

On this background, the European Community is called upon to take actions in the field of organic solvents and water based paints. European legislation on the protection of workers being exposed to paints based on organic solvents is needed.

Particular attention shall be drawn to the need of a European wide Code system for paints:

A European wide Code system for paints (wording taken form the EFBWW policy)

“In the EU there is a strong need for developing and implementing a common code system for paints, in order to prevent exposure to substances harmful to health.

Union demands for a European Code System for paints includes:

- The system shall illustrate the protective (preventive) measures to be taken in a specific work situation.
- The system shall be designed to assess the chance for substitution, in order to use the least harmful products.
- The system shall be well organised and easy to use for the end users.
- The code shall be visible on the product label and included in the datasheet.
- The system shall communicate possible risks for inhalation of vaporising substances from the product and other risks to health (exposure via skin, eyes, respiratory system and consumption).
- The system shall cover all substances present in the products and shall include the potential health effect of the substances.
- The system shall lead to identical codes in all member states and may give opportunity for laying down specific national protective levels.

Competent European institutions shall be urged to search for a suitable model for a code number system.”

In order to provide the best possible protection of workers exposed to organic solvents in paints, the conference stated, that the European Code System has to be based on:

1. European legislation on the application of Codes for all paints put on the market. The Code principles should be defined by EU legislation (preferable) or by a voluntary

agreement between the European paint producers and the professional users of paints, i.e. the European painter trade unions affiliated to the EFBWW and possibly the European employers in FIEC. The European Commission may approve such a voluntary Code agreement. Codes including all available risk information will improve the product information for end-users.

(Note, that the Deco Paint Directive, art. 4, states, that the maximum content of VOC of the products must be included in the product labelling.)

2. European legislation on the protection of workers when using paints stating, that the employers have to pay attention to the product Codes, when assessing the health risks of the product and taking preventive protective measures. The legislation necessary may be made as an amendment of the Chemical Agent Directive (98/24/EEC).

The conference underlined the importance of allowing the EU Member States to continue to set up limitations on the use of solvent based paints, for instance with respect to indoor works and outdoor works under particular weather conditions.

Parallel with the moving towards a European Code System, the conference underlined the need for making further limitations in the relative content of organic solvents in paints, in line with what has already been done in the Deco Paint Directive. The use of particular hazardous chemical substances (e.g. dichloromethane) in paints, strippers and products for floor treatment shall be banned, for instance by including such substances to the Chemical Agent Directive annex III, or the directive relating to restrictions on the marketing and use of certain dangerous substances and preparations (76/769/EEC, expected to be part of REACH) or as an extension of the Deco Paint Directive, see art. 9,1.

The declaration was unanimously agreed upon.

Vilvorde, Copenhagen, Denmark, 5 November 2004

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## **Copenhagen agreement concerning organic solvents in the forestry, wood and building industries**

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**Representatives of building, wood and forestry unions belonging to the International Federation of Building and Wood Workers (IFBWW), the European Federation of Building and Wood Workers (EFBWW) and the Nordic Federation of Building and Wood Workers (NFBWW) held a Conference on Organic Solvents, 24-25 September 1996 in Copenhagen. The meeting adopted guidelines which define a trade union policy concerning organic solvents in the forestry, wood and building industries.**

### **Considerations**

1. Health and safety activities remain a central issue to the IFBWW / EFBWW / NFBWW. Health hazards are a serious concern and have led to discussion and investigation on IFBWW's part. Since 1976, there has been growing concern about the risks resulting from the use of chemical solvents, fillers and preservatives. In 1977, the IFBWW convened a conference on health hazards in the painting trades. In 1984, there was a similar IFBWW conference on health hazards in the construction, wood and forest industries and in 1989, a conference on health hazards in the workplace.

2. Organic solvents are dangerous substances used in many industries and trades. They are found in paints, pesticides, adhesives, lacquers, cleaning and release agents. Organic solvents are causing diseases ranging from irritation of the mucous membranes, allergies, occupational cancers, skin and lung diseases, reproductive problems, "Solvent Syndrome", "Organic Psycho Syndrome" or "neurotoxic effects" and effects passed on to children (teratogenic effects). These are increasingly documented. Organic solvents are also a polluting factor in the indoor climate, often contributing to so called sick buildings. The environmental impact of spills and emissions of organic solvents must also be considered, as well as the assessment of the life-cycle of products, including sustainable sources of raw material and possibilities for recycling.

3. Trade unions demand the use of safe products and processes which have already been developed and marketed containing less or no organic solvents. The IFBWW /EFBWW/ NFBWW advocate the substitution from organic solvents to water-dispersed or solvent-free paints or to high solid paints. The already small amounts of organic solvents in water-based paints must be lowered further.

The IFBWW /EFBWW/ NFBWW promote the use of water-based and hot-melt glues, vegetable oil for moulding release agents, water-based cleaning products for asphalt paving machinery, water-based wood preservatives, water-based lacquers and the use of mechanical fixing methods instead of chemical adhesives in the building, wood and forestry trades.

4. Legislation on the use of solvents aimed at avoiding skin contact and inhalation of such compounds and introducing lower Occupational Exposure Limits (OEL) have been introduced in many countries. Labelling on packaging, codes of classification and safety data sheets are also important developments. Internationally accepted standards such as the ILO Convention No. 170 concerning Safety in the Use of Chemicals at Work and its Recommendation No. 177 are ratified by China, Colombia, Mexico, Sweden and Norway only (Ratification 31.12.1995). The IFBWW /EFBWW/ NFBWW advocate the ratification and implementation of ILO Convention No. 170 and its Recommendation No. 177 which apply to all industries in which chemicals are used and provides detailed regulations including workers rights in the handling of chemicals. Union policies for more healthy products, equipment and design must be updated, and action for implementing these policies must be taken.

The IFBWW, EFBWW and NFBWW believe that each country should take specific measures to reduce the use of organic solvents and to prevent workers being damaged by solvents in the forestry, wood and building industries. In order to ensure that collective protective measures are given priority over individual measures, trade unions demand a plan of action including the cooperation and concerted action of trade unions, employers, research institutes, environmental organisations, international organisations and governments with the following priorities:

### **Information and consultation**

Manufacturers and suppliers of products containing solvents must provide full, clear information concerning the precise contents, health risks and required precautions during production, use and removal. The manufacturer must inform all users if the product is to be changed.

Many countries require health and safety information to be provided to workers. This principle has also been adopted by the ILO in its Convention on safety in the use of chemicals at work. Material Safety Data Sheets (MSDSs) are a widely used and accepted way of providing this information. Material Safety Data Sheets (MSDSs) must provide a basic set of occupational health and safety information for each paint, coating and chemical product. MSDSs must contain the hazards associated with use of the paints and coatings including the minimum requirements for health and safety, the chemical ingredients, the short and long term health effects, first aid information, and storage and transport requirements and fire safety precautions. Employers must account of information contained in the MSDSs from suppliers and manufacturers, before work with the chemical begins. On the basis of the manufacturers MSDSs the employers must draw up a corresponding workplace safety sheet that specifies the measures necessary for the practical use of the product in the workplace.

### **Workers rights and education**

Workers likely to come into contact with solvents must be trained by their employer in the safe use of harmful chemical products. This requires co-operation between the management, the workers and their unions at the workplace. Educational courses should be designed by the relevant occupational health and safety bodies in conjunction with employers' and workers' organisations. Workers must have the right to remove themselves from danger when using chemicals. Women workers must have the right, in the case of pregnancy or lactation, to alternative work. Exercise of these rights should not affect other employment rights of the worker in question.

### **Mandatory labelling**

Products containing solvents must be labelled with warning symbols and safety advice.

### **Product innovation and substitution**

The best form of prevention of serious long-term health hazards is using safer alternative products. Alternative products have already been developed and marketed containing less or no organic solvents. Employers must investigate the possibilities of substitution and must ensure that organic solvent-free products are used. More emphasis must be placed on research into safe products and the dissemination of information.

### **Engineering controls**

Work with solvents requires adequate controls, such as the encapsulation of machinery, properly planned cleaning and adequate general and process ventilation. Local exhaust ventilation controls the hazard at source by collecting and removing solvent vapours before they can build up in the working environment. The design or selection of effective exhaust ventilation systems must include

- **a hood which captures the solvent vapours at their point of generation;**
- **solvent vapours must be captured and emitted without passing through the breathing zone of workers;**
- **a proper filter system in the hood through which the solvent-saturated air passes;**

- a suitable fan or other device to extract and expel vapour and fumes;
- adequate replacement of air by permanent inlets which ensures that replacement air must not contain organic solvents. Organic solvents must be removed from exhausted air and properly disposed off.
- an automatic alarm system that ensures the efficiency of the ventilation system.

### Safe work practices

Safe work practices must take into account the methods by which solvents enter the human body. The main routes of exposure are through inhalation and skin contact. Examples of work procedures which reduce the inhalation of solvents are

- using smaller containers of paint rather than working from bulk containers; smaller containers mean that smaller amounts of solvents can escape by evaporation into the air;
- mixing products in a space with exhaust ventilation, e.g. in a spray booth, rather than on the ground;
- the use of brushes and rollers instead of spraying;
- a separate ventilated room for drying;
- the avoidance of thinners or turps for cleaning dirty skin.

### Protective equipment

The very nature of solvents means that even with the best possible work environment, there may be certain tasks that require workers to use additional protection. Such tasks include using a solvent-based product in a confined space, spray painting or the use of very harmful solvents. Workers must be provided with protective clothing and equipment. For skin protection impermeable gloves, aprons and boots should be used. Gloves must be suitable for the type of solvent used eg. nitrile gloves are impervious to white spirits but neoprene gloves are not suitable. The impermeable effect of gloves will stop after a short period (few hours or less) and protective gloves must therefore only be used once. When spraying with organic solvent based products an air purifying respirator must also be fitted with a particle cartridge to stop paint mists getting through. Air purifying, cartridge type respirators must be changed frequently. Spraying in confined spaces always requires an air supplied respirator.

### Occupational Exposure Limit

An Occupational Exposure Limit (OEL) for solvents must be established and must be lowered as technology and the knowledge of health risks improves. Special attention must be given to the risk of peak exposure.

### Mandatory controls

The concentration of solvents in the air must be regularly monitored and controlled by independent bodies to ensure that Occupational Exposure Limits are respected. Even when the OEL is respected the employer must try to lower the exposure. Regular medical examinations must be considered as a workers' right.

### Compensation for occupational diseases caused by solvents

All victims of occupational disease resulting from the exposure to or handling of solvents must be compensated. The right to compensation must be guaranteed in the case of reasonable suspicion. The burden of proof must lie with the employer and the insurance company rather than with the worker.

### Rehabilitation

Governments must ensure that rehabilitation is provided for patients who have suffered brain damage as a result of long-term exposure to organic solvents. The aim of rehabilitation should be to improve the brain function of the victim, his/her relationship with himself, his family and friends, and where possible, to allow him to reenter the labour market. There must be sufficient financial support for the victims and their families.

In addition, research is required in order to improve the rehabilitation techniques used in these cases. Trade unions must be involved in the planning and implementation of rehabilitation measures.

#### Action points for trade unions

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#### **Company level**

- make a list of all products used at the work place
- demand information concerning health risks and precautions from all suppliers of organic solvent based products
- prepare a report on health problems of people who are exposed to solvents in your workplace
- ask the employer about policies or rules to protect workers using organic solvents
- discuss alternatives for organic solvents in your workplace and press for changes in the products used
- discuss the impact of volatile organic compounds on the indoor air quality, particularly on comfort and health.

#### **Local and national level**

- start a publicity campaign about the harmful effects of organic solvents
- ask the government for specific safety and health regulations on exposure to organic solvents
- ask the government to ratify and implement ILO Convention on Safety in the use of chemicals at work No. 170 (1990) and its Recommendation No. 177.
- ask the government and/or concerned institutions to promote the research on safe chemical products
- encourage testing and labelling of building materials which may emit volatile organic compounds
- recommend that affiliated organisations adopt the demands of this IFBWW/ EFBWW/ NFBWW agreement concerning organic solvents
- ask the International Trade Union Movement to help implement the IFBWW/ EFBWW/ NFBWW agreement concerning organic solvents.

#### **Action points for IFBWW/EFBWW/NFBWW**

- the IFBWW/EFBWW/NFBWW Secretariats should promote the Copenhagen agreement in their own work , e.g. in education activities and regional seminars
  - publication of information about solvents
  - export of hazardous products including organic solvents must be stopped
  - begin consultation with European and international organisations and of paint and solvent manufacturers to press them to adapt their products to guidelines laid down in the Copenhagen agreement.
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## EFBWW policy on organic solvents

### Lines for the EFBWW efforts and aims:

#### Awareness

There is a strong need to raise the awareness of authorities, employers and employees with respect to the real danger of occupational exposure to organic solvents during occupational use.

The EFBWW is aware of the many aspects of the discussion on organic solvents, including aspects relating to the environment, public health and occupational health. As a workers' organisation, the EFBWW activities are focused on the occupational health aspect, respecting the other concerns and other actors. Nevertheless, workers in many sectors are still suffering from the use of organic solvents and the number of illnesses caused by these hazardous substances remains at a high level.

Any policy in this area has to recognise the different situations in the European countries. Considerable progress in some countries on the one hand is contrasted with a lack of action in others countries on the other hand. Taking into account the different aspects, not only is very neat but also opportunities for making improvements in working conditions. The potential for progress can be studied in countries like Denmark.

#### General aims

Considering the above mentioned aspects, the present paper describes the EFBWW aims in the different aspects of a policy on Organic Solvents. The general aim of this policy is to eliminate organic solvents from work places wherever possible. In this respect, the EFBWW activities are based on the IFBWW 1996 "Copenhagen Agreement on Organic Solvents".

The EFBWW's chief objective remains to limit the use of organic solvents as much as is feasible. Bringing highly hazardous solvents onto the market should be restricted or prohibited. Wherever less harmful substitute products are available regulations requiring the substitute to be used must be implemented.

Organic solvents are used in a wide range of applications. They are used both in various technological processes as well as in a great variety of substances. The situation concerning the technology used varies widely in the different sectors. The for these reasons, the technological processes must be further developed in all areas in order either to introduce substitute products which are not harmful to health or else reduce exposure to solvents as far as possible.

#### Occupational diseases

Occupational exposure to organic solvents may cause damage to the brain/CNS system and as a result lead to the disease called CTE (chronic toxic encephalopathy), also called OPS (Organic Psycho Syndrome) and "the painter syndrome".

The European recommended list of occupational diseases (90/326) includes in annex 1 a number of specific organic solvents. By including Organic Psycho Syndrome in the Information Notices on Diagnosis of

Occupational Diseases (1997), the European Commission clearly indicates the causal relationship between the Organic Psycho Syndrome and exposure in the workplace. However, the current situation in member states is often far more grave and the health effects are still denied.

The EFBWW therefore calls on the Member States to recognize Organic Psycho Syndrome as an occupational disease.

EFBWW is aware of the fact, that organic solvents also cause other diseases and disorders, including irritation, dizziness, lack of concentration, skin problems etc. These health problems are sometimes under the threshold of manifest health problems but nevertheless, they result in serious effects on workers' well being. By replacing solvent-based paints and other substances including organic solvents with less harmful substances, the EFBWW wishes to reduce all diseases and disorders caused by organic solvents.

## **The EU System**

We shall again urge the Commission to take the initiative to introduce binding regulations for products including organic solvents, in particular paints, varnishes, glues, thinners etc.

Where the use of specific harmful kinds of organic solvent can be banned by their inclusion under the directive for restrictions on the marketing and use of certain dangerous substances and preparations (76/769/EEC), the EFBWW supports this development.

Additionally, the EFBWW will urge the different actors to include all organic solvent related health damage in the European list of occupational diseases. The character of this list, which is currently under revision, has to be changed into a binding directive, formulating minimum requirements.

Because of the complexity of the issue the European Commission should launch a project in which all kinds of application of organic solvents will be investigated and in which detailed information on all possibilities for substituting organic solvents by less harmful products are recorded. The EFBWW will highlight this need especially for the different kinds of products which are used in the construction and wood working sector.

### A European wide Code system for paints

In the EU there is a strong need for developing and implementing a common code system for paints, in order to prevent exposure to substances harmful to health.

Union demands for a European Code System for paints includes:

- The system shall illustrate the protective (preventive) measures to be taken in a specific work situation.
- The system shall be designed to assess the chance for substitution, in order to use the least harmful products.
- The system shall be well organised and easy to use for the end users.
- The code shall be visible on the product label and included in the datasheet.
- The system shall communicate possible risks for inhalation of vaporising substances from the product and other risks to health (exposure via skin, eyes, respiratory system and consumption).
- The system shall cover all substances present in the products and shall include the potential health effect of the substances.
- The system shall lead to identical codes in all member states and may give opportunity for laying down specific national protective levels.

Competent European institutions shall be urged to search for a suitable model for a code number system. The EFBWW shall assess existing national models and shall present the best as good examples on which basis a European model may be developed.

Models including measures of risks to health and the risks for exposure are considered by us to be preferable to models only including quantitative limits of solvent content, because the latter do not take into account the fact that some solvents are more harmful to health than others.

## **Producing and distributing knowledge and good examples**

As in other areas of workers prevention it is of great importance to be aware of progressive regulations, good examples and activities. The compilation and distribution of this kind of information is a specific focal point in the EFBWW policy and encompasses different levels of activity and co-operation.

### **Within our organisation**

The EFBWW will collect good examples on workers protection. Progressive code systems will be collected as well as sector or company agreements for an effective health prevention.

### **Social dialogue with employers and producers**

Via the social dialogue the European employers shall be encouraged to support the intention of creating a European Code System for paints and other products including organic solvents as well as the substitution of organic solvents, wherever possible.

Producers of paints etc. shall be encouraged to develop alternative less harmful products.

### **European institutions**

The relevant European Bodies (such as the H&S Agency in Bilbao) shall be urged to focus on paints and exposure to organic solvents in order to provide actors with relevant information on solvents vs. water based paints in the light of occupational health.

The European Commission will be urged to compile the existing legislative framework within the European community.

Beside this, the European Commission should list all kinds of organic solvents and possible substitutes for the different applications.

Continued efforts should be made to urge the European Community to promote specific projects in its research and development programmes to research technical processes for reducing exposure to solvents.

### **Co-operation**

In any activity the EFBWW intends to co-operate with other actors.

First of all EFBWW will co-ordinate its activities with the ETUC/TUTB, the IFBWW as well as the NFBWW. The IFBWW shall be encouraged to host a conference on organic solvents. Especially the exchange of information and possible solutions will be of particular value for regions where the extent of the problem has not been well known up to now.

Members of the European Parliament shall be urged to address the question of paints and organic solvents.

Strong links with scientific institutes is of high importance. In the past it was often activities, launched by scientific actors which brought some progress. The EFBWW will continue and extend its co-operation with scientists.

Because of the similarity of their objectives trade unions and the environmental movement should create an alliance for combating health and environmental hazards, caused by organic solvents.

If we consider the foregoing, the EFBWW will communicate its aims and try to cooperate in future activities with these actors aimed at progressive development in terms of practical and legislative measures.

Adopted by the Executive Committee of 21-22 May 2002