

European Week for Safety and Health at Work 2003

“Dangerous Substances – Handle with Care”

By Hans Horst Konkolewsky, Director, European Agency for Safety and Health at Work¹

Dangerous substances are present in most workplaces. Exposure to dangerous substances occurs in many workplaces – also outside of the chemical industry. Asbestos in buildings, solvents in metalworking, diesel exhaust fumes in garages, viral hepatitis in hospitals, pesticides in the agricultural sector all present a wide variety of threats to human health.

Because of the enormous scope of the topic, statistics on dangerous substances are hard to come across, but we do know the following

- About 32 million workers in the EU – almost a quarter of those employed! – are exposed to cancer-causing agents
- 16 % of EU workers report handling dangerous substances and 22% of workers report that they are breathing in fumes and vapours at work for at least a quarter of their working time².
- Dangerous substances contribute significantly to the 350 million working days lost through occupational ill health and to the suffering of over seven million people who are victims of occupational illnesses³. Skin diseases and asthma are top occupational diseases in EU Member states and more often infectious diseases lead to long workplace absences.

The European Agency for Safety and Health at Work has identified risks from dangerous substances as a key topic in its work priorities and is working in several areas to address the challenges they pose.

To provide the right information on key safety and health topics to our different stakeholders is a main priority of the Agency. For researchers, dangerous substances information includes a Web page with links to criteria documents used in the decision-making process for setting exposure limits. For workers and employers, the Agency provides ‘good practice’ information, including to the substitution of organic solvents and asbestos. Political decision makers and social partners can find information about interesting prevention strategies and programmes in the Member states. The website also offers information from the EU and around the world on a wide range of related information including a special Web feature on occupational

¹ The European Agency for Safety and Health at Work was set up by the European Union to help meet the information needs in the field of occupational safety and health. Based in Bilbao, Spain, the Agency aims to improve the lives of people at work by stimulating the flow of technical, scientific and economic information between all those involved in occupational safety and health issues.

² Third European Survey on Working Conditions 2000, European Foundation for the Improvement of Living and Working Conditions

³ Source: Eurostat

exposure limits. In addition, the Agency provides a forum where it is possible to put questions in any EU language to the global net community.

In 2003, the Agency and its network is organising a major awareness-raising campaign on the risks posed by dangerous substances across Europe including more than 30 countries. The European Week for Safety and Health at Work takes place in October, but events are happening throughout the year 2003. The slogan for the campaign is “Dangerous Substances – Handle with Care”.

The key to the success of the campaign is to communicate in simple terms the knowledge that exists and the best practice that abounds to employers and employees, encouraging them to work together to identify and reduce risks.

The Agency launched its campaign at the European Parliament in Strasbourg on 13 May 2003 and all Member States, EU candidate and EFTA countries, the European Commission and Parliament, trade unions and employers’ federations back it actively.

The campaign includes:

- Information packs in all official EU Member State and Candidate Country languages;
- Awareness raising posters and leaflets;
- A multilingual website (<http://osha.eu.int/ew2003/>), including examples of good practice;
- European Good Practice Awards for organisations that have most successfully dealt with the problem of dangerous substances;
- Special events across Europe to bring the key messages of the campaign to life in all organisations, large and small, public and private. Last year, when the Agency highlighted the issue of work-related stress, there were literally thousands of EU-wide events, many co-ordinated by the Agency's network of national Focal Points.

The campaign will culminate in October 2003 with the European Week for Safety and Health at Work. All safety and health institutions and organisations, trade unions, companies, managers, employees and safety representatives are invited to take part and organise their own events during this Week. These activities can include special audits and risk assessments in the workplace; training; distribution of information about dangerous substances; and schemes that encourage employees and their representatives to participate in the event, including linking up with other organisations.



*Launch of the European Week 2003
on Dangerous Substances*

*8th International Symposium
Athens, 19 May 2003*

Hans-Horst Konkolewsky

Director

**European Agency for Safety
and Health at Work**



What is the Agency?

- **The European Union organisation responsible for occupational safety and health information**
- **Contributes to make Europe's workplaces safer, healthier and more productive**
- **Acts as a catalyst for developing, collecting, analysing and disseminating information in co-operation with its Europe-wide network of Focal Points**



Bilbao



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Newsletter 14: EU committed to meeting safety and health challenges of enlargement



23/04/2003: 2003 heralds many challenges for the Agency. And the key challenge is undoubtedly preparing for enlargement. Since its inception in 1996 the Agency has taken many important steps in promoting health and safety but none more so than working with the candidate countries to bring them to the same level as their EU counterparts. The recent enlargement seminar confirmed the willingness of all parties to work towards a safer and healthier new Europe.

[More details](#)

Preventing psychosocial risks at work: European perspectives



11/04/2003: The closing event in Bilbao on 25 November 2002 was jointly organised by the Agency and the Danish Presidency of the European Union. The day was structured around three morning workshops dealing with stress, bullying and violence, and a round table discussion in the afternoon. This Forum publication is based on the speeches made during the three workshops and the round table discussion that followed them.

[More details](#)

Communicating information about dangerous substances



08/04/2003: The Agency is producing a series of factsheets on occupational safety and health information about dangerous substances for the European Week for Safety and Health at Work 2003. Effective communication about the risks to workers' health and their management in the workplace is a common challenge for employers, workers, and their representatives. This factsheet presents points to consider for successful communication.

[More details](#)

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Dangerous Substances

Situation in the EU

- **16% of EU workers report handling dangerous substances, 22% being exposed to toxic vapours**
- **Skin diseases and asthma top occupational diseases in EU Member States**
- **Infectious diseases lead to long workplace absences**
- **16 Mio registered chemical substances
100000 marketed, 30000 commonly used**
- **for estimated about 20000 substances used in the workplace additional toxicological data are needed**

Dangerous substances

Agency activities

- **Website information online - good practice**
 - Occupational exposure limits
 - Frequently asked questions
 - Good practice examples
 - Links to Member state information
- **European Week 2003 activities and products**
- **Research activities - Criteria documents**

Website Information on Good Practice - Dangerous Substances

- **Information on Occupational Exposure Limits**
- **Case studies**
- **By industry/sector**
- **By process**
- **By substance or substance group**
- **Risk Assessment**
- **Health effects**
- **Policy**
- **Training**
- **Frequently asked questions**



European Agency
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Good practice

Dangerous Substances



This section of the European Agency's web site provides up-to-date information on Good Safety and Health Practice related to the substitution of dangerous substances at the workplace.

Many substances have hazardous effects to the health and safety of the worker. These substances are used in many industries, often on a daily basis. In many cases, however, there are safer alternatives available, or the process itself can be changed, so that the use of dangerous substance is no longer required. These pages promote the substitution of dangerous substances at the workplace by offering selected information to guide in the substitution process. The information is currently available for organic solvents and asbestos.

- [Publications](#)
- Information Resources
 - [Information on Occupational Exposure Limits](#)
 - [Case Studies](#)
 - [By Industry / Sector](#)
 - [By Process](#)
 - [By Substance](#)
 - [By Substance Group](#)
 - [Risk Assessment](#)
 - [Health Effects](#)
 - [Policy](#)
 - [Training](#)

What is European Week 2003 ?

- **Europe's largest annual OSH information campaign**
- **Campaign objectives:**
 - Increase awareness and understanding of risks in the workplace
 - Promote good practice solutions
- **Theme: Prevention of risks posed by dangerous substances**
- **Slogan: "Dangerous Substances - Handle with Care"**

EUROPEAN WEEK OCTOBER 2003

DANGEROUS SUBSTANCES HANDLE WITH CARE



EUROPEAN WEEK FOR SAFETY AND HEALTH AT WORK
<http://osha.eu.int/ew2003/>



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Why dangerous substances?

- **Potential risks affect all sectors**
- **The impact on workers includes:**
 - **Occupational and other work-related diseases**
 - **Accidents at work**
 - **Negative influence on the well-being of workers**
- **Business risks through reduced productivity and company liability**
- **DS risks can be prevented**

Key messages

- **Most workplaces are concerned**
- **Don't forget the substances produced during work (dusts, fumes, mists, microorganisms)!**
- **Substitution is possible**
- **Risk assessment is essential**
- **Information has to be brought to workplaces**
- **Information has to be translated for workers and employers into practical guidance**
- **Hints and links to guidance and practical solutions**

Campaign model

- **October 2003 - Decentralised European campaign**
- **Partnership approach - Agency, Focal Points, Social Partners, EU institutions, EU presidency**
- **EU, EFTA & Candidate Countries**
- **Agency Support**
- **European Good Practice Award**
- **Closing Event**

EW 2003 Campaign material (1)

- **Poster and EW leaflet**
- **Six Fact sheets**
 - **Introduction to DS in the workplace**
 - **Elimination and Substitution of DS**
 - **What users need to know**
 - **Respiratory sensitisers**
 - **Skin sensitisers**
 - **Biohazards**



An introduction to dangerous substances in the workplace



Introduction

Dangerous substances are found in many workplaces. A recent survey found that 16 % of workers in Europe reported handling hazardous products and 22 % being exposed to toxic vapours [1]. Exposure to dangerous substances can occur anywhere at work, on farms, in hairdressers' shops, in motor-vehicle repair shops, at chemical plants.

Dangerous substances can cause many different types of harm. Some cause cancer, others can affect the ability to reproduce or cause birth defects. Other substances may cause brain damage, harm to the nervous system, asthma, and skin problems. The harm done by dangerous substances can occur from a single short exposure or by the long-term accumulation of substances in the body.

The theme for the European Week for Safety and Health at Work 2002 is the prevention of risks from dangerous substances. The Agency is producing a series of fact sheets focusing on the communication of occupational safety and health-related information on dangerous substances including biological agents. This fact sheet introduces the key issues in this topic.

Legislation

European legislation aims to minimise the health risks from dangerous substances in the workplace. European Union law places elimination and substitution at the top of the hierarchy of control measures for protecting workers from dangerous substances. The most important pieces of European legislation in this field are regulations on the protection of workers [2] from the risks related to chemical agents, [3] carcinogens [4] (including asbestos or wood dust), and biological agents. [5] Nevertheless, regulations on classification and labelling [6] are equally important, because they determine important information (safety labels, symbols and safety data sheets) available to the users.

These regulations have to be transferred into national legislation. Member States are entitled to include some additional or more stringent provisions for the protection of workers, such as restrictions on use of some work processes or lower limit values, since the corresponding directives only lay down minimum requirements.

It is therefore strongly recommended that you seek clarification of specific national legislation that may apply relating to the use of dangerous substances in the workplace.

It is important to be aware that these regulations on issues such as risk assessment, technical measures and exposure limits also apply to the dangerous substances generated by the work processes used, examples of which are wood dust or welding fumes.

Prevention and control of exposure to dangerous substances

To protect workers' health from dangerous substances, employers are required to:

- assess the risks,
- take action to remove or reduce the risks,
- monitor the effectiveness of the preventive measures and review the assessment.

Risk assessment

Risk assessment is a requirement under European legislation enacted in all Member States. Risk assessment means identifying what may cause harm so that preventive measures can be taken. Proper risk assessment is the basis for successful risk management. Training workers on the basis of risk assessment for safe work practices is an important part of risk management. Trained workers can not only apply the rules but also work more efficiently and promote a healthy and safe working environment. The risk posed by a substance is determined by two factors, the substance's characteristics and the degree of exposure.

A four-step approach to risk assessment

1. **Make an inventory** of the substances used in the processes in the workplace and those generated by the processes such as welding fumes or wood dust.
2. **Collect information** about these substances, i.e. the harm they can do and how this can happen. Safety data sheets (SDS), which must be provided by the supplier of a chemical, are an important source of information.
3. **Assess exposure** to the identified dangerous substances, looking at the type, intensity, length, frequency and occurrence of exposure to workers, including combined effects of dangerous substances used together and the related risk.
4. **Rank the severity** of the established risks. This list can then be used to draw up an action plan to protect workers.



Factsheet 33: Introduction

- **A strong EU legislative framework**
- **Employers have to assess risks due to dangerous substances**
- **Hierarchy of control measures with substitution as a priority**
- **Include substances generated during work**
- **Successful control brings benefits**
- **Occupational Exposure limits laid down in EU and Member States**



Elimination and substitution of dangerous substances



Introduction

The theme for the European Week for Safety and Health at Work 2002 is the prevention of risks from dangerous substances. The Agency is producing a series of factheets focusing on the communication of OSH information on dangerous substances including biological agents. This factsheet introduces the process of eliminating or substituting dangerous substances.

Legislation

European Union law places elimination and substitution at the top of the hierarchy of control measures for protecting workers from the risks related to chemical agents, (*) carcinogens, (†) and biological agents. (‡) For carcinogens and mutagens, substitution requirements are even more stringent and replacement has to be carried out insofar as it is technically possible. Provisions for substitution are laid down in national regulations related to the protection of workers and Member States are entitled to include some additional or more stringent provisions for the protection of workers such as the restriction on use of some work processes, as the corresponding directives only lay down minimum requirements.

Other regulations impose EU-wide restrictions on the marketing and use of certain dangerous substances and preparations, (¶) including, for example, asbestos.

Under the new EU system for chemicals management (REACH) that is currently being developed by the Commission, it is intended to introduce use-specific authorisation for some substances.

It is therefore strongly recommended that you seek clarification of specific national legislation that may apply relating to restrictions in use and the substitution of dangerous substances in the workplace.

Elimination and substitution in the European control hierarchy

European legislation provides a hierarchy of measures to prevent or reduce the exposure of workers to dangerous substances.

Elimination — the best way to reduce the risks connected with dangerous substances is to remove the need to use those substances by changing the process or product in which the substance is used.

Substitution — if elimination is not possible, then the substitution, or replacement, of the hazardous substance or the process with one less dangerous under its condition of use is the next best option.

Control — if a substance or process cannot be eliminated or substituted, then exposure may be prevented or reduced by:

- enclosure of the emitting process;
- control of the emission by better management of the processes;
- technical solutions to minimise the concentration in the exposure zone;
- organisational measures such as minimising the number of exposed workers and the duration and intensiveness of the exposure;
- use of personal protective equipment.

Elimination and substitution in practice

Changing from one substance to another is a three-stage process:

1. **Identify the alternatives:** find out all the options available to you. Look for alternative process methods (to remove the need to use a substance entirely) and potential replacement substances (if elimination is not possible). If the substance you wish to replace is used in a widely applied process such as spray-painting or degreasing, then the number of options available is likely to be large.
2. **Compare the alternatives:** carry out a risk assessment of all the alternatives, including the substance or process used, and compare your findings. Check relevant national legislation on occupational safety and health, as well as environmental and product safety legislation to ensure that the options are legal and compatible, and ascertain the minimum standards that you have to achieve.
4. **Make the decision:** take the decision based on the regulatory needs, technological possibilities, potential implications for the quality of the products, costs, including the required investment, and training for use of the new product.

Where to start

Any avoidable exposure to dangerous substances should be eliminated.

Some risks or where to look:

• Regarding hazards caused by the process:

- open processes, e.g. painting big surfaces, mixing/compounding in open containers/keels;
- processes generating dusts, vapours or fumes or dispersing liquids in the air (e.g. welding, spraying paint).

- Related to the substance:

- If you cannot change the work process, try to eliminate or avoid the exposure for substances that:
 - increase fire and explosion risks;
 - lead to high exposure of workers;
 - result in exposure to many workers;

EN



Factsheet 34: Substitution

- **Substitution top priority EU strategy**
- **Where to start**
- **Guides for substitution**
- **Benefits from substitution**
- **A practical example: The Danish MAL-KODE for paints**



Communicating information about dangerous substances



Introduction

The Agency is producing a series of factsheets on occupational safety and health information about dangerous substances for the European Week for Safety and Health at Work 2002. Effective communication about the risks to workers' health and their management in the workplace is a common challenge for employers, workers, and their representatives. This factsheet presents points to consider for successful communication.

Legislation

EU regulations on classification and labelling [1] set the frame for obligations of producers of chemical substances. They determine important information [2] to be provided in a standardised way in safety labels, risk symbol and safety data sheets available to the user.

The directive related to chemical agents [3] specifies that employers shall obtain additional information that is needed for risk assessment from the supplier or other readily available sources. The employer also has to ensure that the workers and/or their representatives are informed and trained on:

- the hazardous properties of the chemical agents handled;
- the level, type and duration of exposure and the circumstances of work involving such agents;
- appropriate precautions to safeguard themselves and other workers at the workplace;
- the effect of risk management procedures taken or to be taken;
- relevant occupational exposure limit values or biological limit values;

- and where available, the conditions to be drawn from any health surveillance and exposure assessment already undertaken.

Additionally, the employer shall also ensure that the workers are aware of the changes in these circumstances.

For workers likely to be exposed to carcinogens and mutagens (*) or certain biological agents (**), employers have to keep records including information on about exposure and health surveillance. Workers have to be provided with access to their personal data.

These regulations have to be transferred into national legislation. Member States are entitled to include some additional or more stringent provisions for the protection of workers, as the corresponding directives only lay down minimum requirements.

The future EU system of registration, evaluation and authorisation of chemicals REACH aims to increase the availability of relevant information about properties of chemicals, their environmental and health effects, intended uses and risk-reduction measures.

It is therefore strongly recommended that you seek clarification of specific national legislation that may apply relating to the use of dangerous substances in the workplace.

Labelling of chemicals

If a chemical substance or product is classified as dangerous, the manufacturer or the importer must put a danger label on the packaging with information about at least:

- the name or trade name of the substance or product and the name and address of the person responsible for placing it on the market;
- name(s) of the dangerous contents that lead to the danger classification;
- EC registry numbers for substances, for example the Cinacs (*) or Eines (**) number;
- standardised indications of danger, danger symbol (*), risk indications (R-phrases (**)) and safety directions (S-phrases (**)). Provisions are also laid down for preparations containing several dangerous substances which require several symbols and risk phrases.

Risk symbol, risk (R) phrases and safety (S) phrases are indications of the substance's hazard and of safety measures relating to that substance. Both the R and S phrases are set by the directives of the European Community (**). They are used in the labelling of the packages and in safety data sheets to warn and guide the usage of the dangerous goods and preparations. Risk phrases are standardised presentations of the potential harms of the product for health and safety in normal handling and use, for example R21 'Harmful in contact with skin'. Safety phrases and their combinations present preventive measures to be taken such as S15 'Keep away from heat'.

For workplace use, extensive and standardised additional information has to be given in the safety data sheets regarding health effects, contents of the product, appropriate protection measures and personal protective equipment.





Factsheet 35:

Communicating information about DS

- **Extensive regulations on classification and labelling of chemicals**
- **Labels and Safety data sheets**
- **Where to look for information on non-labelled substances**
- **Examples of useful information systems**
- **Checklist for information to workers**
- **Checklist for good communication between employer and workers**

EW 2003 Campaign material (2)

- **A Report:** Case studies of successful communication measures for the transmission of information relating to DS
- **Magazine**
- **Website:** dedicated multilingual information resource for the Week and in the future

→ <http://osha.eu.int/ew2003/>



European Agency for
Safety and Health
at Work

EW 2003 MATERIAL
GOOD PRACTICE AWARDS
INFORMATION RESOURCES

DANGEROUS SUBSTANCES HANDLE WITH CARE



European Week for Safety and Health at Work 2003

According to recent European research, 22% of EU workers report being exposed to toxic vapours for a quarter or more of their working time. In addition, 16% of employees have to handle dangerous substances as part of their daily work. Such exposures can harm workers' health in a variety of ways, with effects ranging from mild eye and skin irritations to chronic lung disorders and cancer.

That's why this year's European Week for Safety and Health at Work is focusing on reducing the health risks of using dangerous substances.

European Week will take place during the month of October 2003, with each country deciding precisely which week is designated. However, the campaign itself will run throughout the year. The full European Week 2003 website will be launched in May and provide up-to-date information on the campaign.

Information provided by: European Agency for Safety and Health at Work

This document: URL: <http://osha.eu.int/ew2003/>

Comments: webmaster@agency.osha.eu.int

Last Modified: 17.02.2003

Good Practice award scheme

- **Recognition of outstanding contributions to risk prevention**
- **National nominations / European jury**
- **Good practices published: on Agency and national websites and booklet**
- **Awards presented at Closing event**



good practice awards 2003

Successful prevention of risks from dangerous substances at work

Call for nominations



European Agency
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at Work

EUROPEAN WEEK FOR SAFETY AND HEALTH AT WORK

<http://osha.eu.int/ew2003/>



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Good Practice Awards – criteria

- **Real improvements**
- **Sustainability across time**
- **Good consultation between management and the workforce**
- **Compliance with relevant legislative requirements**
- **Possibility of transfer to other workplaces and other Member States**

Colloquium and Closing event

- **Closing event 24 November**
 - **Expert workshops**
 - **Colloquium - policy perspectives**
 - **Good practice award ceremony**

