EUROPEAN COMMISSION
DIRECTORATE GENERAL XXIV
CONSUMER POLICY AND CONSUMER HEALTH PROTECTION
Directorate A – Consumer Policy
Unit A4 – Consumer safety and environment

Brussels, 14.10.99

M 292 EN

MANDATE
TO THE EUROPEAN STANDARDS BODIES FOR A GUIDANCE DOCUMENT IN THE FIELD OF SAFETY OF CONSUMERS AND CHILDREN

PRODUCT INFORMATION

INTRODUCTION

This mandate, under the framework standardisation mandate in the field of consumer safety, deals with product information.

Interest in product information has increased greatly in the past years. This is partly due to the fact that consumers are facing nowadays an increasing range of complicated products. Another reason is that consumers, consumer organisations and authorities alike find it necessary that the market is more transparent in view of ensuring greater freedom of choice. The Council of the European Union has also acknowledged this issue and adopted in 1993 a resolution in which the development of a Community framework for providing information on products by means of labelling is set as a priority.

The new Article 129a of the Treaty establishing the European Community (which will be renumbered Article 153 pursuant to the Treaty of Amsterdam) has the objective of ensuring a high level of consumer protection, and not only contributing to such protection. Moreover, the new Article emphases the promotion of consumers' right to information.

Product information can be defined as all kinds of information, text and images, that may accompany or be associated with specific consumer products. Two types of information may be distinguished:

- purchase information that informs the potential buyer about the characteristics of the product that he/she needs to know in order to be able to decide whether the product meets the anticipated conditions of use, and

- instructions for use that inform the user of the product about the things he/she needs to know in order to be able to experience the necessary level of efficiency and safety during the lifetime of the product. This includes information for assembly, installation, operation, storage, maintenance, repair and disposal.

Product information can be given in a variety of different forms, such as:
- text
- images, symbols/pictograms
- diagrams

Generally product information consists of a combination of the above.

Product information can be placed on the product or provided separately from the product. Information carriers may be:
- the product itself
- a label attached to the product
- the packaging
- a manual or leaflet

Generally product information is contained on several information carriers to go with the product. Product information can also be found in catalogues, advertisements, on posters, web sites and other electronic media.

Safety related product information can be defined as all information that informs product users on the hazards related to the product, on the consequences of unsafe use and on the ways to avoid these consequences, including first aid instructions in the case something has gone wrong. Apart from safety related product information, a consumer product carries other types of information, like marketing information, certification and conformity marks, ECO information and the like.

Although it has been established that the impact of consumer information and education on actual consumer behaviour is limited, product information has been widely adopted as one of the routes for the prevention of accidents and injuries. It is used to minimise incorrect and unsafe use of products and to warn the product user against hazards that are inherent to the product, Product information however does not make the product itself more safe. Therefore it should only be used as a final safety measure in cases where the hazard cannot be eliminated or significantly reduced by redesign, guarding or shielding. This is the safety philosophy advocated within ISO/IEC Guide 51 Guidelines for the inclusion of safety aspects in standards (adopted as CEN/CENELEC memorandum No. 9). Product information as a safety measure may benefit from education and information campaigns raising the awareness of the end-users to the fact that product information is available to them.

More and more product information is rightly seen as an integral part of the product. This places product information within the scope of the European Product Safety Directive, introducing a general safety requirement. Also in vertical standards product information requirements are included. An increased use of product safety information is also seen as a result of changes in product liability legislation. Manufacturers and suppliers however may be tempted to evade product liability by providing long lists of warnings. Together with labelling initiatives on other issues than safety, like the environment, this tendency can easily lead to over-labelling.

Product information has attracted the attention of various disciplines, related to human behaviour, communication and design. This has resulted in a vast amount of theoretical knowledge on product information and it's effectiveness, which has been transformed into standards, handbooks, guides for all kinds of target groups, like legislators, manufacturers, standardisers and the like. Although attempts have been made to harmonise product information requirements and their applications, operational guidance is still insufficient.

IDENTIFICATION OF HAZARDS AND RISKS

Compared to other issues of great societal concern, the problem of risks to consumers in the home and leisure area outsize that of road traffic or work-related accidents in number of fatalities and injuries. The cost to society at large is staggering: an estimated 70-95 billion ECU is lost each year due to direct costs of injuries and lost earnings. In the EC-region 80,000 fatalities and 40 million injuries are estimated to happen each year due to home and leisure accidents. From the conclusions of the first European Convention in Consumer Safety, it is concluded that "as most risks are unknown to consumers and changing over time due to changing technology and life styles, there is an ethical duty to inform consumers" (ECOSA, 1996). Although specific data are lacking it is estimated that in the larger part of these accidents consumer products are involved.

There are no studies known to exist which specify the contribution of deficient product information to these figures. But the fact that accidents with household chemicals still happen, despite the fact that a mandatory labelling system of a very comprehensive nature is in place (Venema, Trommelen & Akerboom, 1997), may be taken as evidence that such a labelling system is not effective. Also, there is little or no evidence that the application of product information results in a reduction of the number of accidents. No labelling scheme in Europe is known to be evaluated in terms of accident and injury prevention. An article on baby walker-related injuries (Smith et al, 1997) concludes that despite the provision of warning labels in the US serious injuries continue to occur.

Effectiveness of product information depends heavily on the performance of the human information processing system. From a cognitive ergonomics point of view (Lehto & Miller, 1986; Sanders & McCormick, 1992) product information must be perceived, understood, retained and appropriately responded to before it can be considered effective. This means that product information must be available at the time the corresponding hazard may occur, it must be legible, understandable and persuasive to all people who will come into contact with the product (including those with special needs).

Availability

All relevant product information must be available in time for the consumer to take appropriate action. This requires adequate positioning of all the relevant information. An example of relevant product information missing is given in the recent study by International Testing on the safety of baby walkers (BEUC, ANEC, IT, 1997). Baby walkers on the European market were tested according to the requirements laid down in the draft European standard for baby walkers (prEN 1273). This draft standard also specifies a number of requirements with regard to product information. All baby walkers tested failed to meet even the most basic requirements for product information.

In a Dutch study (Venema, 1990) people were observed using a ladder. The ladder used was labelled according to the Dutch regulations. A questionnaire afterwards revealed that more than half of the people observed (54%) had not noticed the label. Reasons to explain this were the bad positioning of the label (on the side) and the fact that people did not expect a label on a ladder.

Legibility

Type face and type size, space between words and lines, colour use and contrast, durability and overall lay out are some of the commonly known factors to influence the legibility of text (Sanders & McCormick, 1992; ISO/IEC Guide 37, 1995). A Dutch study performed by Hoogermolen (1997) showed that in a sample of 21 manuals of electrical household appliances and 15 manuals of medical devices, the letter size was deficient in 27% of the cases (not even taking into account that older and reading deficient people need larger letter sizes than an average consumer (Adams & Hoffman, 1994; Hartley, 1994; Kroner et al, 1994)).

Understandability

Understandability is of major importance for the effectiveness of product information. Short and simple sentences, frequent and familiar words, clear illustrations, diagrams and pictograms are important features for understandable product information. A recent study on the effectiveness of labelling of household chemicals (Venema, Trommelen & Akerboom, 1997) revealed serious problems with the understandability of the information prescribed in the Hazardous Preparations Directive (88/379/EEC). Understandability problems occur due to the vagueness and abstractness of some of the warnings and instructions (r- and s-phrases) prescribed. Half of the prescribed warning symbols are understood by less that 50% of the consumers. Special concerns on symbols have been identified in a CPC report (Reddy, 1996)

A survey to establish the extent and nature of adoption of symbols in standards demonstrated the wide variation of symbols being adopted in a haphazardly way. In different standards for different products the same symbols are being prescribed for different messages. Also, different symbols are used for one message. Not to speak mention the fact that less than 5% of the symbols are known to have undergone some degree of testing. A British study on the effectiveness of symbols (Davies et al, 1997) reports poor understandability of symbol currently in use, especially the more abstract ones. The limitations of symbols must be taken into account when considering their use.

Persuasiveness

Knowing the hazards and the consequences of unsafe use is considered to have a positive influence on compliance with instructions for safety. Therefore, a complete warning message consists of a signal word (e.g. WARNING), an instruction part (what to do and what to avoid) and an explanation of hazard and/or consequences. An analysis of product information accompanying children's products in the Netherlands (Hagenaar & Trommelen, 1992) revealed that in 14% of the cases no mention was made of the hazards involved and in 95% of the cases no consequences of unsafe use were included in the product information.

A considerable number of consumers are confused on the reasons for certain safety instructions on hazardous household chemicals (Venema, 1989; Petré, 1994). They mistakenly attribute certain safety instructions to the environment or to efficient use of the product. As a result of the fact that consumers intended compliance for recommended behaviour that relates to their personal safety is highest, this may influence the effectiveness of the information negatively.

Given the fact that the effectiveness of product information can never be greater than the probability of successfully completing any single step in the information processing sequence (perceive, understand, retain, respond), it becomes clear that the development of totally effective product information is a hopeless task. Nevertheless all effort should be given to design and present product information in such a way that maximal effectiveness is achieved. Also careful and proper application of this safety measure must be addressed.

NATIONAL AND EUROPEAN REGULATIONS

European regulations

The need for adequate labelling is recognised in many European Directives. For instance under the *General Product Safety* Directive (92/59/EEC), producers have a duty to provide relevant information to enable consumers to assess hazards inherent in the product throughout the normal or reasonably foreseeable period of its use, were such risks are not immediately obvious to the user. This includes information on the precautions to be taken to avoid risks.

In 1993 the European commission also adopted a resolution in which the development of a Community framework for providing information on products by means of labelling was set as a priority. Market transparency and freedom of choice was the main aim of this resolution. There has been no follow up of this despite the new initiative given to the Commission under Article 129a under the Maastricht Treaty and emphasised by the Amsterdam treaty. The Commission is required to promote consumer information under article 129a of the EC treaty. The need to provide adequate information to consumers is stated as follows in this article:

Article 129a
The Community shall contribute to the attainment of a high level of consumer protection through:

- *measures adopted pursuant of Article 100a in the context of the completion of the internal market;*
- *specific action which supports and supplements the policy pursued by the Member States to protect the health, safety and economic interests of consumers and to provide adequate information to consumers.*

The *Hazardous Preparations* Directive (88/379/EEC) prescribes that chemical products containing one or more dangerous substances must be labelled by means of a symbol and subscript and the relevant R- and S-phrases for hazard identification, specification and safety instructions. The symbols and subscripts and the sentences are included in the annexes of the Directive. Some basic requirements are given for the presentation of the information (e.g. minimal dimensions of the label and symbols, readability, distinctiveness and a horizontal position of the information).

The Directive for *Personal Protective Equipment* (89/686/EEC) prescribes that each piece of protective equipment should be accompanied by a clear and understandable users instruction in the official language of the country of sale. It specifies the content of the users instructions (instructions on use, cleaning and maintenance, level of protection, identification of the manufacturer and the like) but gives no requirements for the presentation of the information.

The *Machine Directive* (89/392/EEC) states that the manufacturer is obliged to inform the user of residual risks. The information for use of the machine must be unambiguous, easy to understand and concise. It must at least be available in the language of the country of use and one other language. If the machine is meant to be used non-professionally than the users instructions must be adapted to the expected knowledge and educational level of this non-professional user. Warnings for residual and unforeseen hazards must be given by means of understandable pictograms and/or text in one of the languages of the country of use.

National regulations

The Netherlands
The "Warenwet" (Commodities Act) states that it is not permitted to supply information with a product that is misleading or can give a false feeling of security. Correct users instructions and relevant safety information are mandatory (articles 19 and 20). A standard exists on users instruction manuals (NEN 5509).

Sweden
According to the Swedish Product safety Act a tradesman can be required to supply safety information an/or precautionary information with his products.

Iceland
The Act on Product safety and Official Market Control contains provisions on the general instructions accompanying the product, such as labelling, any instructions for its use and disposal and any other indication or information provided by the producer. It may be stipulated that this information shall be written in the Icelandic language.

Germany
A German standard exists. DIN V8418: 1988 Benutzerinformation; Hinweise für die Herstellung.

France
A purchase information standard exists. NF X50-051: 1982 Guide pour l'élaboration des informations principales nécessaires aux consommateurs avant l'achat. Also a standard exists on product information for durable products. NF X50-002 Avis relatif à l'information du consommateur sur les biens de consommation durables.

Denmark
According to the Danish Marketing Practices Act it is an offense to make use of false, misleading, or unreasonably incomplete indication or statement likely to affect the demand for or supply of goods. Also, at the time of making an offer, proper information or instructions shall be provided according to the nature of the goods, where such information or instructions are of importance in the evaluation of the nature or quality of the goods, especially including fitness for purpose, durability, the nature of any risks involved, and information as to maintenance.

EXISTING STANDARDS AND ONGOING STANDARDIZATION WORK

CEN/CENELEC PNE Rules contain limited requirements on the provision of information as follows:

2.4.3 Requirements

In some product standards it may be necessary to specify that the product shall be accompanied by warning notices or by instructions to the user or installer, and to specify their nature. On the other hand, requirements concerning use or installation as such shall be included in a separate standard since they are not requirements applicable to the product itself.

2.4.6 Classification and designation

This element establishes a system of classification, designation and/or coding of products, processes or services that conform to stated requirements. For convenience, this element may be combined with element 2.4.3 (Requirements)

2.4.7 Marking, labelling, packaging

This element specifies the marking of a product (e.g. manufacturer's or vendor's trademark: model or type number). It may include requirements for the labelling and/or packaging of the product (e.g. handling instructions, hazard warnings, date of manufacture).
Symbols specified for marking shall be in conformity with relevant International standards
Elements of 2.4.6 and 2.4.7 may be supplemented by an informative annex giving an example of ordering information.

Although the PNE Rules contain reference in *Annex A Basic International Standards,* to the many standards which exist on the design, testing and cataloguing of symbols, no reference is made to ISO/IEC Guides or CEN/CENELEC memorandums which relate to the provision of information.

There are a substantial number of such Guides. *ISO/IEC Guide 37 Instructions for use of products of consumer interest* was recently revised, published in 1995, and contains detailed guidance on what instructions should contain, how they should be presented and how they should be assessed. *ISO/IEC Guide 14 Product information for consumers* and *ISO Guide 41 Standards for packaging - Consumer Requirements* contain a limited amount of guidance on provision of information. They are currently in the process of being updated which provides an opportunity for clarifying guidance on labelling, including symbols. *ISO/IEC Guide 51 Safety aspects - Guidelines for their inclusion in standards* contains a section on 'Information for safety' including instructions, minimum marking, warning notices and safety signs. This Guide has been adopted as CEN/CENELEC Memorandum No. 9 so is of considerable importance within CEN and CENELEC. The Guide is also currently under revision.

EN 71-1 Safety of *toys* - Mechanical and physical properties. This standard gives a number of specific warning sentences required with certain types of toys, some indications on the contents of additional warnings and instructions. With regard to the presentation of the information, the standard makes reference to national legal requirements. In some cases a requirement is given for the location of the warning (on packaging, on the toy). EN71-6 prescribes the use of a warning symbol on the suitability of toys for very young children

EN 414 Safety of *machinery* - Rules for the drafting and presentation of safety standards. This standard states that a clause "Instructions for use" is a compulsory element in a machinery standard. It shall contain additional provisions for information for use. Each machinery standard shall specify minimum markings (identification of the manufacturer, conditions of use, date of expiration and the like).

Several standards and draft standards for *child care and use articles* contain a chapter with requirements for markings, purchase information and instructions for use. An attempt to harmonise these, and other requirements, is currently being undertaken by CEN/TC252/WG6. This Working Group has prepared a document (CEN/TC 252 N275) which was recently accepted by TC252 and will be published as a CEN report in 1999. This report includes a chapter on product information. This chapter consists of definitions and a safety philosophy with regard to the application of product information, and includes model requirements for markings, purchase information and instructions for use. The annex to this chapter contains examples of warning sentences and symbols, and guidance on the design and presentation of product information.

With regard to *symbols* ISO and IEC work separately on standards for the application, design, testing, and cataloguing of safety symbols, public information symbols and symbols for use on equipment (ISO TC 145 and IEC/TC3 respectively). Problems arising from this work originate from the fact that not all international work is co-ordinated (Reddy, 1996) and of a lack of promotion and publicity with respect to the existing standards and guides (Hope, 1996). Key symbol standards are:

ISO 3461	General principles for the creation of graphical symbols
ISO 3864	Safety colours and safety signs
ISO 7000	Graphical symbols for use on equipment - Index and synopsis
IEC 417	Graphical symbols for use on equipment - Index, survey and compilation of single sheets
ISO 7001	Public information symbols
ISO 9186	Procedures for development and testing of public information symbols
ISO/TR 7239	Development and principles for application of public information symbols

The following table clearly shows the discrepancies in the work of international symbols standardisation.

ISO/IEC standards work	Application	Design	Testing	Catalogue
Safety symbols		ISO 3864	ISO 9186	
Symbols on equipment		ISO 3461		ISO 7000 IEC 417
Public information symbols	ISO/TR 7239		ISO 9186	ISO 7001

EN272 *Tactile danger warning* provides requirements for a general warning suitable for the visually handicapped, but the warning is also beneficial as additional warning for those not visually handicapped.

THE NEED FOR A MANDATE

The European countries have adopted general requirements concerning product information in the General Product Safety Directive. Most vertical Directives and standards give guidance on the (general) content of the product information provided with the product. In a few cases actual sentences and/or symbols are prescribed. Very limited guidance is given to the presentation of product information, although this is essential to its effectiveness. On the international level guidance is available on the application, design, presentation and testing of product information, but this information is not complete, not coherent and difficult to find.

Due to the fact that guidance on the inclusion of product information requirements in standards on the European level is limited, vertical standardisation committees set up their own labelling requirements. Apart from the fact that they have to re-invent the wheel and loose a lot of time, the resulting requirements may not be optimal and conflicts may arise with requirements set in other committees (e.g. different symbols for the same message).

There are concerns with regard to the following main issues:

- The choice for product information as a preventive measure in cases were technical requirements for the product are more appropriate. Product information should not be used to overcome design deficiencies (e.g. the mobility problem with baby walkers is currently addressed by means of labelling requirements, while design solutions are available)
- Lack of attention for the basic limitations of the human information processing system (e.g. over warning and information overload due to liability issues and other non safety related labelling initiatives)

- Lack of testing and evaluation of product information initiatives
- Lack of promotion and awareness raising of product information as a preventive measure

Attention needs to be given to such issues to ensure that an effective approach to consumer product information is being adopted within all European standards of interest to consumers. An *integral framework* needs to be formulated in which proper and co-ordinated consideration is given to all aspects of product information, including:

- text and symbols
- purchase information and instructions for use
- warnings and instructions
- on product markings and information provided separate from the product

This framework must give guidance to

- application of product information
- design of product information
- presentation of product information, including durability
- testing and evaluation
- promotion of product information

This integral framework should form the basis to co-ordinate the inclusion of requirements for product information in European standards for consumer products and to lay down clear guidance and procedures for the development and adoption of product information as a safety measure. The available international guidance documents need to be placed within this integral framework for product information, adopted when relevant and disseminated to technical committees.

Summarising it can be said that effective product information is needed in light of consumer protection, market transparency and consumer choice. In order to promote product information effectiveness it is of utmost importance to have a coherent, comprehensive and up to date integral framework for consumer product safety information.

MANDATE

CEN, CENELEC and ETSI shall set up one single body or a group of experts to monitor and co-ordinate product information initiatives and give guidance to technical committees involved in preparing product information requirements in consumer product standards. Guidance for standardisation should be established to ensure the coherence and consistency of the results of the standardisation work as regards product information, safety warnings and labelling.

The European bodies responsible for standardisation, being CEN, CENELEC and ETSI are requested to accept a mandate to :

AS A FIRST STEP.

1- Draft a guidance document which gives an integral framework for the inclusion of product information requirements in standards relevant to consumers. This guidance document shall include application, design, presentation, testing and evaluation of all aspects of product information, including text and symbols, purchase information and instructions for use, warnings and instructions, on product markings and information provided separate from the product (the informative annexes provide details to be covered in such a framework).
International and European documents, as existing standards, guides and catalogues (special attention shall be paid to the approach taken by CEN/TC 252), and relevant documents from other sources shall be taken into account.

2 – Set up a mechanism to make sure that the guidance document is actually used and continuously improved; distribute the document to all relevant technical bodies; promote ways of insuring that the information is accessible at the right time; request committees to report on use and experiences at regular intervals; evaluate the use and report to the Commission.

AS A SECOND STEP.

Possible review specific existing standards in view of possible amendment in the context of the guidance document.

EXECUTION OF THE MANDATE

CEN, CENELEC and ETSI shall present to the Commission within 3 months of the date of acceptance of this mandate, a report setting out the arrangements they have made for execution of this mandate.

The report shall include target dates for the presentation of the guidance document and for the proposition of a list of standards, which should be revised as a second step after publication of the guidance document.

Relevant interested parties, such as representatives of consumers, shall have the possibility to participate to the process.

Following the execution of this mandate and depending on its result, a possible further mandate to the production of revised standards can be envisaged.

REFERENCES AND BIBLIOGRAPHY

- Adams J.M. & Hoffman L.

Implications of issues in typographical design for readability and reading satisfaction in an ageing population.
Experimental Ageing research, 20, p. 61-69.

- Akerboom S.P. et al.

Products for children: Development and evaluation of symbols for warnings,
The Netherlands, Consumer Safety Institute, 1995.

- ANSI

ANSI guide for developing user product information
American National Standards Institute ANSI, Consumer Interest Council, New York, 1990

- BEUC, ANEC, IT

Press release: “Don’t buy a baby walker for Christmas”
25 November 1997

- Brugger C.

Public information symbols: a comparison of ISO testing procedures
In: Proceedings: Public Graphics: visual information for everyday use / H.J.G. Zwaga, T. Boersema, H.C.M. Hoornhout (eds)
Stichting Public Graphic Research, Utrecht, 1994

- Brune A., Mortureux M.

Marques et labels, clés des marchés
Enjeux, N°132, Mars 1993

- COFACE

Safety information on dangerous products in the home. Consumer’s appreciation
COFACE Survey, Documents 1994

- Cooper S., Page M.

Instructions for consumer products: guidelines for better instructions and safety information for consumer products
London, Her Majesty’s Stationery Office, 1988

- Council of the European Communities

Council Resolution of 5 April 1993 on future action on the labelling of products in the interest of the consumer
Official Journal of the European Communities, 20-04-1993, 93/C, 110/01

- CSC, La Lettre documentaire de la Commission de la sécurité des consommateurs, n°9, 1993

Etiquettes et pictogrammes

- CSC, La Lettre documentaire de la Commission de la sécurité des consommateurs, N°15, 1995
Pour un étiquetage lisible par tous

- CSC, La Lettre documentaire de la Commission de la sécurité des consommateurs, N°18, 1996
L'étiquetage de sécurité

- Davies S., Haines H., Norris, B. & Wilson J.
Safety Pictograms: Are they getting the message across?
Proceedings of the Fifth International Conference on Product Safety Research, ECOSA/Generalitat de Catalunya, Amsterdam, 1997.

- Didier J.M. & associates
A comparative study on the current practice in the EC member states relating to safety labels
Brussels, J.M. Didier & associates, 1987

- Driver, R.W.
A communication model for determining the appropriateness of on-product warnings
IEEE transactions on professional communication , September 1987

- ECOSA
Safety Labelling. The role of product information as a tool for increasing consumer safety
Amsterdam, ECOSA, May 1996

- European Commission
European consumer guide to the single market. Labelling: how to know everything - or almost everything - about a product
Luxembourg: Office for Official Publications of the European Communities, 1996

- Gava M.-J.
La Commission propose un marquage des emballages. Directives européennes
Enjeux, N° 174, Mai 1997

- Hadden S.G.
Read the label: reducing risk by providing information
Boulder (etc.): Westview, 1986

- Hagenaar R. & Trommelen M.
A study on hazard and safety information accompanying children's products.
University of Leiden, Centre for Safety Research, 1992.

- Hartley J.
Designing instructional text for older readers: a literature review
British Journal of Educational technology, Vol. 25, No. 3, p. 172-188.
- Hoogermolen M.

Kwaliteit van productinformatie (The quality of product information)
Stageverslag. Amsterdam, Consumer Safety Institute, 1997

- Hope R.

The new ISO/IEC Guide 37 on instructions for use of consumer products
In: Safety Labelling. The role of product information as a tool for increasing consumer safety
Amsterdam, ECOSA, May 1996

- ISO International Organisation for Standardisation

Survey of marks indicating conformity with standards and also some informative labelling schemes
Geneva, ISO

- ISO/IEC Guide 14

Product information for consumers (under revision)

- ISO / IEC Guide 37.

Instructions for use of products of consumer interest.
Geneva, ISO, 1995

- J'achète mieux, N°257, novembre 1997

La course au label qualité

- Kroner B.A., Kelley C.L. & Baranowski E.M.

Labelling deficiencies and communication problems leading to medication misuse in the elderly
Drugs and Aging, 5, 6, p. 403-410.

- Laughery K.R., Brelsford J.W.

Receiver characteristics in safety communications
In: Proceedings of the Human Factors Society 35th annual meeting, San Francisco, California, September 1991
Santa Monica, CA: Human Factors Society, 1991

- Lehto M.R.

Designing warning signs and labels: a theoretical / scientific framework
International Journal for Consumer Safety, Vol. 3, N° 4, December 1996

- Lehto M.R. & Miller J.M.

Warnings Volume 1 Fundamentals, design and evaluation methodologies
Ann Arbor, Michigan, Fuller technological Publications, 1986.

- Main B.W., Rhoades T.P., Frantz J.P.

Are current product labelling systems effective?
NFPA Journal, January-February 1994

- McCarthy R.L., Finnegan J.P., Krumm-Scott S., ...(et al)

In: Proceedings of the Human Factors Society 28th annual meeting
Santa Monica, CA, Human Factors Society, 1984

- Miller J.M., Frantz J.P., Rhoades T.P.

A model for designing and evaluating product information
In: Proceedings of the Human Factors Society 35th annual meeting, San Francisco, California, September 1991
Santa Monica, CA: Human Factors Society, 1991

- O.C.D.E.

L'étiquetage et les essais comparatifs. Rapports du Comité de la Politique à l'égard des consommateurs
Paris, 1972

- O.E.C.D.

Seminar: Consumer Policy in the Nineties (8/9 October 1991)-Transparency, consumer information and the functioning of markets
Paris, 1991

- Petre L., Molisse N.

Safety Information on dangerous products
In: Proceedings of the International Conference on Product Safety Research, Amsterdam, November 1993
Amsterdam, ECOSA, 1993

- Petre L.

Safety information on dangerous product: consumer assessment of hazard symbols
International Journal for Consumer Safety, Vol. 3, N° 1, March 1996

- Petre L.

Safety labels questioned: do they really reach the consumer?
International Journal for Consumer Safety, Vol. 3, N° 4, December 1996

- Reddy M.T.

Adoption of symbols within standards of interest to consumers
BSI, CPC document No. 96/001848 rev, 1996

- Rhoades T.P., Frantz J.P., Miller J.M.

Emerging methodologies for the assessment of safety related product communications
In: Proceedings of the Human Factors Society 34th annual meeting, October 1990, Orlando, Florida
Santa Monica, CA: Human Factors Society, 1990

Sanders M.S. & McCormick E.J.
Human factors in engineering and design (7th edition)
New York, McGraw-Hill Book company, 1992

- Smith G.A., Bowman M.J., Luria J.W. & Shields B.J.

Babywalker-related injuries continue despite warning labels and public education
Paediatrics, Vol. 100, N° 2, August 1997.

- Test-Achats, N°395, janvier 1997

Labels peu convaincants

- Test-Achats, N°401, juillet-aout 1997

Un label énergétique

- Trommelen M.

Harmonisation of product information for child-care products
International Journal for Consumer Safety, Vol. 3, N°.4, December 1996

- Trommelen M.

Products for children: Standardisation of warnings.
Amsterdam, The Netherlands, Consumer Safety Institute, 1994.

- Trommelen M.

Products for children: Testing of warning symbols in Europe.
Amsterdam, The Netherlands, Consumer Safety Institute, in preparation.

- van Weperen W.

Guidelines for the development of safety-related standard for consumer products
Accid. Anal. & Prev., Vol. 25, N°1, 1993

- van Weperen W.

Requirements for safety-related information in standards for consumer products
International Journal for Consumer Safety, Vol. 1, N°1, March 1994

- Velotta C.

Safety labels: what to put in them, how to write them, and where to place them
IEEE transactions on professional communication, September 1987

Venema A. Productinformatie ter preventie van ongevallen in de privésfeer (Product information as a preventive means for home and leisure accidents)
The Hague, Stichting Wetenschappelijk Onderzoek Konsumentenaangelegenheden SWOKA, 1990

- Venema A., Trommelen M. & Akerboom S.

Effectiveness of labelling of household chemicals.
Consumer Safety Institute, Amsterdam, 1997.

- Venema A., Zieverink H.J.A.

Product information effectiveness: implications for the design and standardization of product information
The Hague, Stichting Wetenschappelijk Onderzoek Konsumentenaangelegenheden SWOKA, 1992

- Venema A., Trommelen M.

Standardization of warnings
In: Proceedings 3rd International Conference on Product Safety Research: Amsterdam, 6-7 March 1997/ W. van Weperen (ed)
ECOSA, Amsterdam, 1995

- Which?, February 1997

Product markings

- Wright P.

Enhancing the usability of written instructions
In: Proceedings: Public Graphics: visual information for everyday use / H.J.G. Zwaga, T. Boersema, H. C. M. Hoornout (eds)
Stichting Public Graphics Research, Utrecht, 1994

Informative annex 1

PRINCIPLES OF REQUIREMENTS FOR PRODUCT INFORMATION

Based on : CEN/TC 252 N275 Draft CEN report Child use and care articles: General and common safety specifications

1 Terms and definitions related to product information

1.1 product information: texts and images that may accompany or be associated with a specific product. Among other things, this includes labels, certification marks, markings, leaflets, manuals and brochures.

1.2 marking: product information permanently attached to the product or, if the packaging creates the risk, to its packaging; all markings belong to one of the categories "purchase information" and "instructions for use", or both.

1.3 purchase information: product information provided at the point of sale prior to the purchase decision (including mail order catalogues, tele-sales etc.).

1.4 instructions for use: product information provided during the use phase; this includes information for assembly, installation, operation, storage, maintenance, repair and disposal.

2 Safety philosophy

Safety-related product information should only be prescribed in relation to known hazards of the product under consideration. Over-labelling can obscure important safety information. A risk analysis should be applied to decide for which hazards safety-related product information is needed and which part of the information should be marked on the product.

It is recommended to prescribe specific signal words, safety sentences and symbols in standards. In the case of severe hazards a signal word, preferably **WARNING**, should be added. Hazards and consequences should be specified if not obvious. Safety sentences and symbols should have been developed in accordance with recognized guidelines and/or the guidelines given in Annex 2. If it is left to manufacturers to design safety sentences and/or symbols it is recommended to attach the guidelines given in Annex 2 to the product standard.

It is recommended to prescribe specific requirements on the presentation of safety sentences and symbols (see 3 for model requirements). The requirements needed depend on the type of information.

Markings are prescribed in the case of safety information that requires extra attention (e.g. because the hazards involved are severe, because the hazard occurs at every occasion of use, because the unsafe behaviour is likely to happen). Markings on the product are also recommended for identification purposes.

Purchase information informs the potential buyer about the safety-related characteristics of the product that the buyer needs to know in order to be able to decide whether the product meets the anticipated conditions of use.

Instructions for use inform the user of the product about the things the user needs to know in order to be able to experience the necessary level of safety during the lifetime of the product. The instructions for use should include all purchase information and all markings.

It is recommended to attach Annex 3 to the product standard to ensure a legible presentation of product information by manufacturers.

3 Model requirements to include in standards

It is recommended to include the following sections into the chapter on product information in the standard. Parts irrelevant to the product can be left out. Product-specific safety sentences and symbols developed in accordance with Annex 2 shall be included. Notes should be left out.

3.1 General

Information should be given to avoid the possible consequences of product-related hazards which cannot be eliminated by design, or sufficiently controlled by safeguarding or shielding. The information given should relate to the type or model with which it is provided. It must be understandable (see Annex X). Other safety information should not be given, unless relevant. Other information should not be presented in such a way that it interferes with the effectiveness of the safety information prescribed below.

Note: add Annex 2 to the standard as Annex X

Safety sentences should be legible (see the guidelines given in Annex Y), and should be presented at least in the official language(s) of the country of sale. In the case of different languages, they should be easy to distinguish, e.g. by separate presentation. All product information requirements should still be fulfilled after repeated consultation of the information carriers.

Note: add Annex 3 to the standard as Annex Y

3.2 Markings

Markings should be permanently attached to the product. If the packaging creates the risk, markings should be permanently attached to the packaging. Markings should not hinder product use, nor create a new risk (e.g. choking or suffocation). The markings should not become detached and should be legible and understandable after performing a durability test.

If marking the product with the following safety information would not be possible (e.g. the product is too small) (parts of) the information may be presented otherwise or a deviation in letter size is allowed, provided that extra attempts are made to draw the user's attention. The creation of new risks must be prevented.

Visible markings
The following safety information should be marked on the product. This marking should always be visible during the time or occasion when the corresponding hazard may occur.

Note: add product-specific safety sentences and symbols

If the packaging creates a risk of suffocation, it should be visibly marked with the following safety sentence or the corresponding symbol):
"**WARNING**: Keep this (plastic) cover away from your child to avoid suffocation".

Additional markings
The product should also be marked with the following information, which not needs to be always visible.

- Identification of the product
  The identification is adequate if products with different use characteristics can be distinguished by the user of the product.
  (It is left to the supplier to decide whether separate parts of the product, or different product batches are given a separate identification).
- Identification of the responsible supplier
  The identification is adequate if one of the following descriptions is given:
  - name and full postal address of the supplier in the country of sale; or
  - name and place of settlement of the supplier in the country of sale, in such a way that the address and/or telephone number can easily be traced, e.g. with the help of a telephone directory; or
  - (in case the brand name or the supplier is well-known and there are several easily recognisable points of sale in the country of sale:) name of the brand or supplier of the product.

3.3 Purchase information

The following information should be visible at the point of sale prior to the purchase decision.

Note: add product-specific safety sentences and symbols

If (part of) the purchase information is easily removable or provided separate from the product, precautions should be taken to ensure permanent availability of this information during the purchase phase, e.g. by providing additional facilities (e.g. a display) or instructions for retailers.

3.4 Instructions for use

The following information should be available during use; this includes assembly, installation, operation, storage, maintenance, repair and disposal.

> Note: add product-specific safety sentences and symbols which are selected at the basis of the safety philosophy described in 2. Repeat all markings and all purchase information. Symbols marked on the product or the packaging should be repeated together with the correspondent warning sentence

If an information carrier is provided separate from the product, or designed to be kept separate from the product, the carrier should

- be easy to store, and
- include all safety-related information, and
- be visibly marked:
  "Read these instructions carefully before use, and keep them for future reference. An injury may occur if you do not follow the instructions."

Informative annex 2

GUIDELINES FOR THE DEVELOPMENT OF SAFETY SENTENCES AND SYMBOLS

Based on : CEN/TC 252 N275 Draft CEN report Child use and care articles: General and common safety specifications

This annex can be used to develop safety sentences and symbols.
Even if these guidelines are taken into account, the understanding of the safety-related information should be checked in realistic purchase and use conditions and within the target population.
It is recommended to inform CEN/CENELEC/ETSI about any new sentence or symbol introduced with a product or a standard.

Safety sentences
Safety sentences should describe the nature and the consequences of the hazard(s), give guidance on what to do and what to avoid. They should comply with the following warning grammar (see Annex D1 for examples):

Instruction part / Hazard part / Consequence part.

Or, in more detail (specific for the English language):

(Adverb of frequency) + Verb (predicate sentence) + Product (-features) + Conditions / Hazard(s) / Consequence(s).

In the case of severe hazards, a signal word, preferably **WARNING,** should be added at the beginning of a warning sentence or at the top of a list of warnings. Hazards and consequences should be specified if not obvious.

SIGNAL WORD: / Instruction part / Hazard part / Consequence part.

Safety sentences should be understandable. The following guidelines should be observed:

- the average number of words per sentence varies between 15 and 25, with a maximum of 30 words; the average number of syllables per word is less than 1.5 (for some European languages this criterion might be to strict);
- the used words are simple, frequent and familiar, concrete rather than abstract, specific rather than general, and they are used consistently throughout the text;
- the style makes use of action verbs (e.g. use instead of utilisation), personal and possessive pronouns (e.g. your child instead of the child), and the imperative mood (e.g. avoid instead of you should avoid);
- ambiguous words, double negations, abbreviations, acronyms, technical terms and jargon

are avoided;
- sentences are affirmative rather than negative; negative sentences can be used to prevent undesirable actions (e.g. never leave your child unattended);
- each sentence contains only one command, main idea or new piece of information;
- operating procedures are explained by illustrations and diagrams;
- illustrations, tables and symbols are placed below or next to the text which refers to them;
- if pieces of safety related information are included in a larger text, e.g. a manual, this text begins with a conspicuous summary of all essential safety-related information.

Safety symbols
- It is recommended to restrict the use of safety-related symbols to a concise set of symbols concerning main hazards that apply to a lot of products of the same family.
- Every effort should be made to ensure that a symbol does not already exist for the message.
- Symbols should be developed according to recognised standards.
- Newly developed symbols should be adopted in a recognised catalogue of symbols and consumer education should be considered.

Informative annex 3

GUIDELINES FOR THE PRESENTATION OF SAFETY SENTENCES AND SYMBOLS

Based on : CEN/TC 252 N275 Draft CEN report Child use and care articles: General and common safety specifications

This annex gives an overview of criteria and guidelines for a legible presentation of safety sentences and symbols.
Even if these guidelines are taken into account, the legibility of the resulting product information should be checked in realistic purchase and use conditions and within the target population.

Safety sentences
- the x-height of letters in continuous text in manuals etc. is at least 1.5 mm (between 9 and 12 points letter size;
- the x-height of letters in on-product text is at least
  3 mm when anticipating optimum reading conditions, e.g. viewing distance 0.5 m and good lighting, or
  8 mm when anticipating difficult reading conditions, e.g. viewing distance 2 m and poor lighting;
- upper case, italics and bold print or underlining are avoided for long strings (more than one line);
- the typeface is sans-serif; it has clear, open faces; it is solid rather than delicate looking; it has an x-height that is large in proportion to the whole character; it does not have any idiosyncratic features (examples of good typefaces are Gill Sans, Univers and Helvetica);
- the variety of typefaces and sizes is kept limited;
- the space between lines equals the space between words, and it does not exceed 25% of the letter size;
- the lay-out is consistent throughout the text, the text is left justified, and the paragraphs are separated by white lines.

Safety symbols
- the size of significant details in symbols is at least 1 mm (or more when viewing distances of more than 1 m are expected);
- safety symbols have a height of at least 20 mm (or more when viewing distances of more than 1 m are expected and when the symbol is placed on large surfaces);
- safety symbols are presented in such a way that the proportion of elements and the colours are such as prescribed.

General
- text and illustrations are in dark ink on light paper without underlying patterns; the colour combinations red-green and blue-yellow are not applied;
- the opacity of paper is 2.0 or above; the use of paper with a glossy finish is avoided.