



BUSINESS PLAN
CEN/TC 85
Eye protective equipment

EXECUTIVE SUMMARY

Eye protective equipment

Business Environment

- 1998 consumption in Italy, France, Germany, the United Kingdom and Spain amounted to approximately 61 million pairs of spectacles for a total population of 294 million inhabitants;
- Number of application sectors : Occupational, Sport and leisure, do it your-self;
- Parties involved:
 - multinational and national companies;
 - users / consumers;
 - public authorities;
 - OHS institutes;
 - test laboratories;
 - certification bodies;
 - social partners.

Benefits

To define the necessary standards to be used to perform the desired level of commercial interoperability in Europe, considering its very significant position in the international market.

- Since 1989, 20 standards and 8 amendments were adopted,
- Cost-efficient, legally safe way of demonstrating through harmonised standards, conformity with ESR as set by the Directive 89/686/EEC
- improvement of the design of eye protective equipment in relation to expecting performances in terms of safety and ergonomics
- harmonisation and clarification of test methods allowing for unambiguous technical specifications and therefore, leading to lower costs.

Priorities

To make European standards available related to:

- enhancing the reproducibility of testing methods by means of intercomparison testing, estimating uncertainties associated to the test results and considering “environment”-related aspects,
- ensuring the proper transfer of the EN specifications and test methods at ISO/TC 94/SC 6 “*Eye protection*” level, in order to conciliate legitimate preservation of normative assets, European manufacturing interests and the economic necessity for companies to open themselves to the world.

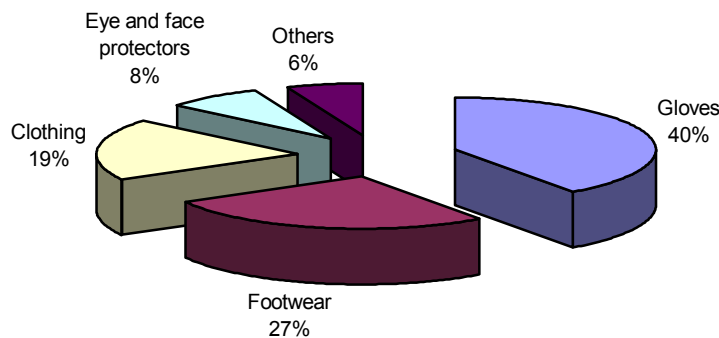
1 BUSINESS ENVIRONMENT OF THE CEN/TC

1.1 Description of the Business Environment

The following political, economic, technical, regulatory, legal, societal and/or international dynamics describe the business environment of the industry sector, products, materials, disciplines or practices related to the scope of this CEN/TC, and they may significantly influence how the relevant standards development processes are conducted and the content of the resulting standards:

- **Identification of the the sector and products**

In the market of Personal Protective Equipment (PPE) it is noticed a greater interest with the protection of the eyes. The repartition is as follows (*source Vision n° 158, December 1997*) :



Personal eye protectors are intended to protect against various hazards, as encountered in all industrial sectors, laboratories, educational establishments, DIY activities, sports and leisure activities, etc which are likely to impair vision or damage the eye and/or face.

The hazards are the following (*source : Inform'Optique, July 2001*):

- ✓ 70 % : mechanical - static objects, ingress of fine particles, abrasion from fibrous materials or foliage and burns from hot liquids and molten solids;
- ✓ 18 % : radiation - optical radiation (UV, Visible and IR), laser beam;
- ✓ 12 % : chemical - very fine powders, aerosols, liquids, fumes, vapours and gases.

Among all occupational accidents, those concerning the eyes are approximately 4 % and correspond to several hundred thousand of injured persons at European level and several millions of working days lost for temporary disablement.

There are on the market a plenty of category and sub-categories of eye protectors (spectacles, goggles, face shields, welding helmets, ...) and of types of protective glasses that can be mounted on these protectors and which are adapted to the various natures and levels of the risks existing at work or in other activities. At European level there are probably several hundred thousands of different models of protectors and combinations of protectors/glasses.

- ***Interested parties***

Interested parties are multinational and national companies, both eye-protective equipment producers, users / consumers, public authorities, OHS institutes, test laboratories, certification bodies, social partners.

All types and sizes of companies are concerned, big international manufacturers as well as SME's. It is noted that the principal world manufacturers of eye and face protectors are European.

- ***Implication of the Legislation***

The design of eye and face protectors are under the new approach Directive 89/686/EEC (amended by the 93/95/EEC, 93/68/EEC and 96/58/EEC directives) concerning all types of PPE for professional use, sport and leisure. They are submitted in majority to the EC type examination procedure. Notified bodies perform the corresponding conformity assessment to the relevant Essential Safety Requirements (ESR) of the Directive mainly by reference to the corresponding EN harmonised standards. After the adoption of the PPE Directive in 1989, the existence of these standards became indispensable to ensure the credibility of the laid down regulatory system and to prepare the ground so that the Directive can be implemented under the right conditions.

The elaboration of an appropriate set of standards translating the ESR of the Directive in terms of performances and test methods to be satisfied, was urgent to avoid disparities in judgement between laboratories which could lead to sources of contention and exchange obstacles. Up to now, 20 permanently adopted standards and 8 amendments can be listed.

For the matters related to electrical safety (e.g. protection against short circuit electric arc) co-operation was searched between CEN/TC 85 and CLC/TC 78 in application of the CEN/CENELEC agreement (nov.1994) in the PPE field.

The use by workers of PPE at the workplace is covered by the council directive 89/656/EEC and the commission communication 89/C328/02 concerning the assessment of the safety aspects of PPE with a view to the choice and use thereof.

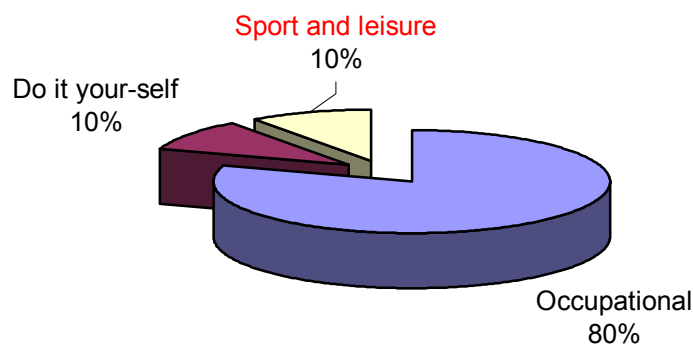
1.2 Quantitative Indicators of the Business Environment

The following list of quantitative indicators describes the business environment in order to provide adequate information to support actions of the CEN/TC 85:

Market share and figures

The eye and face protector is one of the most important PPE. They are used in a various occupational, sport, leisure, and domestic activities to protect the wearers against very dangerous and frequent risks that could lead to irreversible and disabling injuries

There are 3 segments in the market :



✓ **Eye and face protectors for industrial use** (source ESF - European Safety Federation) :

- Total sales volume for all European member states : 300 million euros
- manufacturers : the biggest is European.

✓ **Solar protection equipment industry** (source : ESA – European Sunglass Association – September 1998)

While America remains the leading world consumer market for this type of product, Europe ranks second with general public sales in 1995 estimated at US \$ 1 500 millions for 175 millions units. (Source : World sunglass market report, Paumanok Publication Inc).

This market is considered as a growth market over the coming years, with a percentage increase in the region of 5 %. According to this same source, 1998 consumption in Italy, France, Germany, the United Kingdom and Spain amounted to approximately 61 million pairs of spectacles for a total population of 294 million inhabitants.

Within this context, the demand is turning towards more elaborate products in order to meet the expectations of consumers who are increasingly more preoccupied with protection, fashion and specific uses, linked to the diversification of open air leisure activities.

The product flows generated by the European Union member states are extremely high and reflect, in the comparison of its value and unit number balances, the specificity of this complex and dynamic industry.

Thus for the first 15 EU Member States* :

	IMPORT					EXPORT				
	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000
Units in million	153	126	137	129	145	34	35	30	35	40
Euros million	171	173	184	212	280	329	338	305	303	500

(Source : EUROSTAT 2000)

This table shows for 2000

- a strong growth of exports : +14 % in pieces
- a moderate/low growth in imports : +12% compared to 1999 but lower than 1996

While these 15 Member States import a high quantity of cheap products, or components, its industry remains a high exporter of high quality finished goods, a trend which is confirmed on the basis of the results of these last two years.

But the market share of sunglasses imports from asian countries continue to grow.

* no data are available concerning the situation in the 10 new Member States.

2 BENEFITS EXPECTED FROM THE WORK OF THE CEN/TC

Standardisation in the field of eye protective equipment provides a positive economical impact as it gives means and tools to better achieve the following objectives :

- ✓ improvement of the design of eye protective equipment in relation to expecting performances in terms of safety and ergonomics;
- ✓ harmonisation and clarification of test methods allowing for unambiguous technical specifications and therefore, leading to lower costs;
- ✓ cost-efficient, legally safe way of demonstrating through harmonised standards, conformity with ESR as set by the Directive 89/686/EEC.

3 PARTICIPATION IN THE CEN/TC

All the CEN national members are entitled to nominate delegates to CEN Technical Committees and experts to Working Groups, ensuring a balance of all interested parties. Participation as observers of recognized European or international organizations is also possible under certain conditions. To participate in the activities of this CEN/TC, please contact the national standards organization in your country.

4 OBJECTIVES OF THE CEN/TC AND STRATEGIES FOR THEIR ACHIEVEMENT

4.1 Defined objectives of the CEN/TC 85

The principal objective of CEN/TC 85 is the establishment of specifications and test methods relevant to eye and face protectors to help manufacturers and notified bodies in the CE certification.

4.2 Identified strategies to achieve the CEN/TC.s defined objectives.

- **Strategies**

With the exception of the test method for resistance to misting for complete eye protectors and of perhaps a few other forthcoming "sport and leisure activity"-based topics, and additional standards related to humanitarian demining in support to an EC mandate, the range of existing standards covers the essential needs of the current market.

"Product" standards including, in particular, 3 standards (EN 166, 167 and 168:1996) define basic requirements for general use as well as corresponding testing methods. Eye protectors fitted with corrective lenses fall within the area of application of these 3 standards. However, refractive power tolerance and other properties related to corrective effect are specified in standards EN ISO 8990-1 and 2.

These basic standards were complemented by a series of standards covering specific risks or products (ultra-violet, infrared, solar, laser radiation, welding masks and filters, mesh protectors, skiing, snow mobile and motorcycling goggles, visors and face firefighters, ambulance and emergency service helmets). These standards all refer to EN 166 with regard to basic specifications.

Over the last 4 years, the Committee work schedule has therefore focused on revising existing standards or adopting amendments taking into account technological advances as well as shortcomings and inaccuracies noted by users of these standards. Most of the standards have been revised once and those covering "laser" filters have already been revised twice.

Whilst these standards fulfill satisfactorily the market requirements, some progress still needs to be made and a number of gaps need to be filled. For several years, one characteristic difficult to evaluate from the subject of interlaboratory research : *oculars abrasion resistance*. It should be noted that hopes of achieving consensual results in the short term remain still limited.

As for the content of existing standards, its development over the forthcoming years should essentially involve :

- ✓ enhancing the reproducibility of testing methods by means of intercomparison testing, estimating uncertainties associated to the test results and considering "environment"-related aspects.
- ✓ ensuring the proper transfer of the EN specifications and test methods at ISO/TC 94/SC 6 "Eye protection" level, in order to conciliate legitimate preservation of normative assets, European manufacturing interests and the economic necessity for companies to open themselves to the world.

- ***Mode of operation***

To achieve these objectives, it was decided to organise the TC in 10 working groups corresponding to specific groups of products (sunglasses, laser, UV, IR, welding filters, protectors for motorcyclists, welding protectors,) or the horizontal matters (terminology, guidance, allocation of requirements and testing, basic specifications and test methods).

- ***Liaison***

A liaison was established in 1997 between the European Sunglass Association (ESA) and CEN/TC 85.

5 FACTORS AFFECTING COMPLETION AND IMPLEMENTATION OF THE CEN/TC WORKPROGRAMME

The composition of WGs must be partly renewed and completed, indeed the internationalization of companies of this industrial sector has led to a reduction of the number of experts in the CEN WGs.

The harmonization of the existing EN standards with the ISO standards currently under development will furthermore induce more vigilance and cross cooperation for the TC 85 experts.