

SAFETY AND HYGIENE REGULATIONS



Servei de Prevenció de Riscos Laborals
UNIVERSITAT POLITÈCNICA DE CATALUNYA

PPE: EYE AND FACE PROTECTORS

CODE

SHR 105

Date:

July 2003

Revision:

00

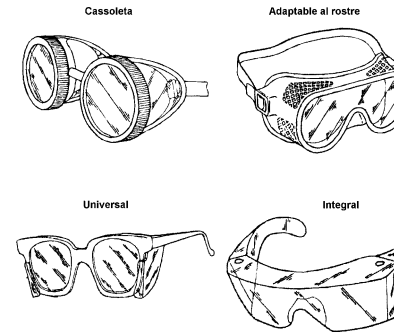
Page:

1 of 6

CLASSIFICATION

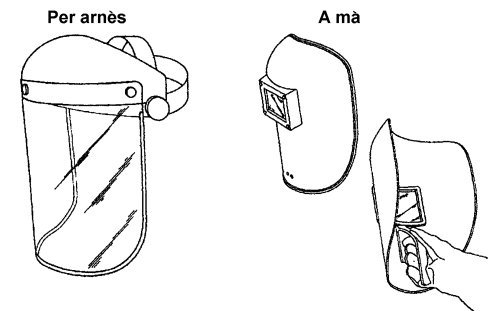
Protective eyewear: types

- A. *Safety glasses*: eye protectors in which the lenses are attached to a frame with arms (with or without side shields).
- B. *Safety goggles (wraparound)*: eye shields that seal off the eye area and are in contact with the face.



Protective shields: types

- A. *Face shield*: eye protector that covers all or part of the face.
- B. *Hand-held shield*: face shield that is held in your hand.
- C. *Full face shield*: eye protector that also covers the face, the throat and the neck. It can be held on the head directly with a harness or with a protective helmet.
- D. *Mounted face shield*: eye protector with face protection that can be worn directly on the head using a head harness, or together with a safety helmet.



MARKING

Eye and face protectors must be marked with the following:

- CE marking.
- Marking showing the degree of protection in the case of filter lenses.

SAFETY AND HYGIENE REGULATIONS



Servei de Prevenció de Riscos Laborals
UNIVERSITAT POLITÈCNICA DE CATALUNYA

PPE: EYE AND FACE PROTECTORS

CODE **SHR 105** Date: **July 2003** Revision: **00** Page: **2 of 6**

MARKING ON THE LENSES

1. Identification of the manufacturer.
2. Optical class.
There are three optical classes, depending on the manufacturing tolerances relating to spherical, stigmatic and prismatic power.
Cover plates are always **class 1**.
Other lenses may be any of the three optical classes.
3. Class of protection.
This marking is only found on filter lenses and includes the following elements (it does not include filters for soldering):
4. Mechanical strength.
5. Non-adherent to molten metal and resistant to penetration of hot solids.
Lenses that meet this requirement must be marked with the **number 9**.
6. Resistant to surface damage by fine particles.
Lenses that meet this requirement must be marked with the **letter K**.
7. Anti-fogging.
Lenses that meet this requirement must be marked with the **letter N**.
8. Markings of laminated lenses.
To place layers that could break dangerously on the outside, these lenses must be identified with a mark on the outside face of the nasal part so that they are assembled correctly.

CLASS OF PROTECTION – CODE NUMBER	DEGREE OF PROTECTION
2 UV filter that may affect colour recognition	This is an indicator of the darkness of the filter, and gives an idea of the amount of visible light that can pass through.
3 UV filter that allows good colour recognition	
4 Infrared filter	
5 Solar filter with no infrared protection	
6 Solar filter with infrared protection	
6 Solar filter with infrared protection	

MECHANICAL STRENGTH	
SYMBOL	DEGREE OF STRENGTH
No symbol	Minimum mechanical strength
S	Increased robustness
F	Withstands low energy impact
B	Withstands medium energy impact
A	Withstands high energy impact



PPE: EYE AND FACE PROTECTORS

CODE

SHR 105

Date:

July 2003

Revision:

00

Page:

3 of 6

MARKING ON THE FRAME

1. Identification of the manufacturer.
2. Number of the standardised regulation used to assess conformity with essential health and safety requirements.
3. Fields of use.
4. Resistance to the impact of high-speed particles.

FIELDS OF USE	
SYMBOL	USE FOR PROTECTION
No symbol	Basic use
3	Liquids
4	Coarse particles
5	Gases and fine particles
8	Short circuit arc
9	Molten metals and hot solids

STRENGTH	
SYMBOL	IMPACT
F	Low energy impact Valid for any type of protector
B	Medium energy impact Only valid for safety goggles and face shields
A	High energy impact Only valid for face shields



PPE: EYE AND FACE PROTECTORS

CODE

SHR 105

Date:

July 2003

Revision:

00

Page:

4 of 6

PROTECTION

Depending on how they work, eye and face protectors must protect against the following risks:

- **Injuries to the eyes and face due to external actions.**
- Mechanical hazards (impact, flying particles, chips, perforation, etc.).
- Radiation hazards (soldering, UV, infrared, laser, solar, ionising, etc.).
- Thermal hazards (cold, heat, etc.).
- Chemical hazards (powders, corrosive liquids, toxic or corrosive substances, etc.).
- Thermal and mechanical hazards (splashes of molten metal, etc.).
- **Injuries to people due to actions on their eyes and face.**
- **Health hazards or limitations associated with the use of eye or face protectors.**
- Hazards of discomfort or limitations at work due to the use of eye or face protectors (bad fit, sweating, limited sight due to fogging, alteration in colour perception, etc.).

SELECTION: RECOMMENDATIONS

- Before personal protection equipment is purchased, the **table of risks** should be completed to obtain more accurate criteria.
- The **manufacturer's information booklet** should be considered, and must include the following useful information:
 - Name and address of the manufacturer or authorised representative.
 - Number of the harmonised regulation used to assess the product's conformity with essential health and safety requirements.
 - Identification name of the model.
 - Classes of protection and features.
 - Accessories.
 - Explanation of markings.
 - Warnings.
 - Storage.
 - Use, maintenance, cleaning and disinfection.
 - Expiry date or service lifetime.
 - Any other useful information.

SAFETY AND HYGIENE REGULATIONS

PPE: EYE AND FACE PROTECTORS

CODE **SHR 105** Date: **July 2003** Revision: **00** Page: **5 of 6**

SELECTION OF PERSONAL PROTECTION EQUIPMENT (PPE): PROTECTIVE EYEWEAR

TYPES	CLASSIFICATION						
	ACCORDING TO THE FRAME				ACCORDING TO THE LENSE		
	TYPES OF FRAME	ATTACHMENT SYSTEM	VENTILATION SYSTEM	SIDE PROTECTION	MATERIAL	OPTICAL CLASS	OPTICAL CHARACTERISTICS
SAFETY GLASSES	Single	Side arms	With ventilation	With side shields	Mineral glass	Type 1 (higher optical quality)	With vision correction
	Double	Headband	No ventilation	No side shields	Organic	Type 2	No vision correction
	Simple	Attached to helmet			Mesh	Type 3 (lower optical quality)	
	Double	Harness					
SAFETY GOOGLES	Adjustable to fit face						
	Eyecup goggles						
	Additional						

SAFETY AND HYGIENE REGULATIONS



Servei de Prevenció de Riscos Laborals
UNIVERSITAT POLITÈCNICA DE CATALUNYA

PPE: EYE AND FACE PROTECTORS

CODE

SHR 105

Date:

July 2003

Revision:

00

Page:

6 of 6

SELECTION OF PERSONAL PROTECTION EQUIPMENT (PPE): PROTECTIVE SHIELDS

TYPES	CLASSIFICATION				
	ACCORDING TO THE FRAME CHARACTERISTICS			ACCORDING TO THE VISOR CHARACTERISTICS	
	TYPE OF FRAME	ATTACHMENT SYSTEM	VIEWING WINDOW	VISOR MATERIAL	OPTICAL CLASS
FACE SHIELD	Welding	Hand-held	None	Plastic	Type 1 (higher optical quality)
HAND-HELD SHIELD	Textile with reflective cover	Harness	Fixed	Wire mesh	Type 2
FULL FACE SHIELD	Others	Attached to the safety helmet	Moveable	Textile mesh	Type 3 (lower optical quality)
MOUNTED FACE SHIELD		Attached to respirator			