



# EUROPEAN STANDARDS

European directives 89/686/EEC Conception of Personal Protective Equipment(PPE)  
PPE are classified in three categories related to the degree of risk they are designed to protect against. The procedure to prove compliance with the requirements of the Directive is specific for each category and is proportional with the risk.

### Category I

Minor risks

PPE of simple design, where the designer assumes that the user can himself assess the level of protection provided against minimal risks, the effects of which are gradual and can be safely and timely identified by the user.

### Category II

Intermediate risks

Especially injury. The glove must comply with one or more standards and is certified by a notified body as being compliant.

### Category III

Irreversible risks

PPE of complex design intended to protect against mortal danger or against serious and irreversible health risks, which cannot be identified in sufficient time.

### EN 420

General requirements

> Scope

This standard specifies the general requirements: ergonomic requirements, construction, sizing, high visibility, marking, user information for protective gloves.

> Markings

Each glove carries the identification of the manufacturer, the reference the size and the CE mark. If it is classed in category III, the number of the notified body that carried out the tests also appears on the glove.

SIZE GLOVE / HAND	HAND SIZE (mm)		GLOVE (mm)
	PALM CIRCUMFERENCE	LENGTH	MINIMAL LENGTH
6	152	160	220
7	178	171	230
8	203	182	240
9	229	192	250
10	254	204	260
11	279	215	270

### Dexterity

5 performance levels, determined by a test in which metal bars of various diameter are picked up.

> PH VALUE

All gloves are checked for compliance in terms of the PH value greater than 3,5 and less than 9,5.



### EN 388

Mechanical Risks

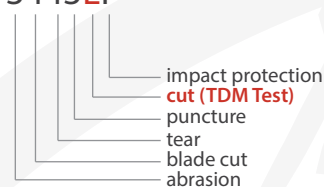
This standard applies to gloves that protect against physical and mechanical hazards, it specifies requirements for abrasion resistance, perforation resistance, tear resistance and cutting resistance.

### NEW LEVEL

EN388



3443EP



CHARATERISTIC	Level 1	Level 2	Level 3	Level 4	Level 5
ABRASION RESISTANCE (number of cycles)	100	500	2000	8000	----
CUTTING RESISTANCE (index)	1,2	2,5	5,0	10,0	20,0
TEAR RESISTANCE (in newton)	10	25	50	75	----
PERFORATION RESISTANCE (in newton)	20	60	100	150	----



**A** 2 Newtons = 203 Grams to Cut  
**Light Cut Hazards**

Applications:  
lumber / wood / paper, warehouse, General carpentry,  
small parts assembly, general purpose, construction



**B** 5 Newtons = 509 Grams to Cut  
**Light / Medium Cut Hazards**

Applications:  
lumber / wood / paper, warehouse, General carpentry,  
small parts assembly, general purpose, construction



**C** 10 Newtons = 1019 Grams to Cut  
**Medium Cut Hazards**

Applications:  
aerospace, appliance manufacturing, automotive,  
general carpentry, glass, HVCA / sheet metal users  
/window glazers, lumber / wood / paper, metal  
fabrication, metalworking, plastic, plumbers



**D** 15 Newtons = 1529 Grams to Cut  
**Medium Cut Hazards**

Applications:  
aerospace, appliance manufacturing, automotive,  
general carpentry, glass, HVCA / sheet metal users  
/window glazers, lumber / wood / paper, metal  
fabrication, metalworking, plastic, plumbers



**E** 22 Newtons = 2243 Grams to Cut  
**Medium / Heavy Cut Hazards**

Applications:  
aerospace, metal stamping, metal recycling, metal  
fabrication /metal working, appliance manufacturing,  
automotive, general carpentry, glass, HVAC / sheet  
metal users /window glazers, lumber / wood / paper,  
metal fabrication, metalworking, plastic, plumbers



**F** 30 Newtons = 3059 Grams to Cut  
**High Cut Hazards**

Applications:  
aerospace, metal stamping, metal recycling, metal  
fabrication /metal working, appliance manufacturing,  
automotive, general carpentry, glass, HVAC / sheet  
metal users /window glazers, lumber / wood / paper,  
metal fabrication, metalworking, plastic, plumbers



### EN 374-1z

This standard specifies the requirements of gloves that protect against chemicals and/or micro-organisms and defines the used terminology.



### EN 374-2

Sealed against penetration of liquids (test: see EN 374-2) This test is a pass/fail test.



### EN 374-3

Permeation resistance to chemicals tested according to method EN 374-3. Each combination of glove/chemical is classified according to the time the glove resists to permeation of the chemical.



### EN 407

This standard specifies the test methods and the general requirements, the classification and the marking of gloves for protection against heat and/or fire (flames, contact heat, convective heat, radiant heat, small metal splashes or large projections of molten metal).



### EN 511

This standard specifies the characteristics and test methods for protective gloves against cold transmitted by convection or conduction to a temperature of -50°.



### EN 1149-1

This standard defines a test method and requirements for electrostatic properties of protective clothing.