



## EUROPEAN STANDARDS FOR PPE

Rubberex gloves are certified compliant with the texts and tests defining the standards indicated for each model.

### CE category

Directive 89/686/EEC



Category I Minor risks

Category II Reversible risks

(injury), certified compliant by a notified body.

Category III Irreversible risks

(corrosion), certified compliant and tested by a notified body whose number is specified.

### EN 420

General Requirement



The user can consult the instruction for use.

### EN 388

Mechanical Protection



Test	Performance Levels				
	1	2	3	4	5
a) Abrasion resistance (cycle)	>100	>500	>2000	>8000	-
b) Blade cut resistance (index)	>1.2	>2.5	>5	>10.0	>20.0
c) Tear resistance (newton)	>10	>25	>50	>75	-
d) Puncture resistance (newton)	>20	>60	>100	>150	-

### EN 374

Chemical Protection and Micro-organism

EN374-1 (terminology and performance requirement)

EN374-2 (resistance to penetration)

EN374-3 (resistance to permeation by chemicals)

### EN 374-2

Micro-organisms Resistance Glove



Assess by: Air leakage test or water filling test

AQL Level	1	2	3	AQL ≥ 2
	4.0	1.5	0.65	

### EN 374-3

Low Risk Chemical Protection Glove



Assess by: Water leak test  
Water proof but not passing the level required for high risk chemical protection glove.

### EN 374-3

Low Risk Chemical Protection Glove



Assess by: Chemical permeation test

Breakthrough times more than 30mins (levels 2) for a minimum of 3 specific chemical listed below and water proof. Therefore the letter code of the chemicals can be more than 3 letters and up to 12.

Code	Chemical
a	Methanol
b	Acetone
c	Acetonitrile
d	Dichloromethane
e	Carbon disulphide
f	Toluene
g	Diethylamine
h	Tetrahydrofurane
i	Ethyl acetate
j	n-Heptate
k	Sodium hydroxide 40%
l	Sulphuric acid 96%



### EN 511

Cold Protection

Test	Performance Levels				
	0	1	2	3	4
a) Resistance to convective cold	$I > 0.1$	$0.1 < I < 0.15$	$0.15 < I < 0.2$	$0.22 < I < 0.3$	$0.3 < I$
b) Resistance to contact cold	$R < 0.025$	$0.025 < R < 0.05$	$0.05 < R < 0.1$	$0.1 < R < 0.15$	$0.15 < R$
c) Permeability to water	Fail	Pass			

(\* Fail: water penetrated after 30min; Pass: no water penetrated after 30min)



### EN 407

Thermal Risk Protection

Test	Performance Levels			
	1	2	3	4
a) Burning behavior	≤20	≤10	≤3	≤2
after burn (Times sec)				
after glow (Times sec)	N/R	≤120	≤25	≤5
b) Contact heat (Temp in °C after 15 sec)	100	250	350	500
c) Convective heat (heat transfer delay sec)	≤4	≤7	≤10	≤18
d) Radiant heat (heat transfer delay sec)	≤5	≤30	≤90	≤150
e) Small splashes of molten metal (drop)	≥5	≥15	≥25	≥35
f) Large splashes of molten metal (g) 30	30	60	120	200

\* N/R - not require



### EN 60903

Electric Risk Protection

Class (X)	Tested at Voltage	Approved for work under voltage	Category (Y)	Addition Requirement
00	2500	≥ 500	A	Acid resistance
0	5000	≥ 1000	H	Oil resistance
1	10000	≥ 7000	Z	Ozone resistance
2	20000	≥ 17000	M	Resistance against high mechanical strain
3	30000	≥ 26500	R	Oil, Ozone and high mechanical strain
4	40000	≥ 36000	C	Resistance against extreme cold

### EN 12477

Welding Glove



Combination from testing of EN407 And EN388

Type A glove - higher protection against heat

Type B glove - lower protection against heat but are more flexible and pliable

