

UNDERSTANDING EUROPEAN PROTECTION STANDARDS

To help you choose the best possible protection for your application, we strive to provide you with the most detailed technical information. That's why we've included European Protection Standards (EN) where appropriate. The following charts explain the EN icons throughout the guide, giving you more complete information about chemical, temperature and mechanical resistances.

EN 374



Micro-Organisms

A glove shall not leak when tested to an air and/or water leak test, and shall be tested and inspected in compliance with the Acceptable Quality Level.

Only applies if the AQL is equal to or below 1.5

Performance Levels	1	2	3
AQL	4.0	1.5	0.65

EN 374



XYZ

Chemical Protection

Breakthrough time > 30 min. for at least three chemicals from this list: (XYZ represent the code letters for three of these chemicals for which the glove obtained > 30 min. breakthrough time)

- | | |
|----------------------|-------------------------|
| A. Methanol | G. Diethylamine |
| B. Acetone | H. Tetrahydrofurane |
| C. Acetonitrile | I. Ethyl acetate |
| D. Dichloromethane | J. n-Heptane |
| E. Carbon disulphide | K. Sodium hydroxide 40% |
| F. Toluene | L. Sulphuric acid 96% |

Performance Levels	0	1	2	3	4	5	6
Minutes	<10	10	30	60	120	240	>480

EN 374



Low Chemical Resistance

This icon can be used for gloves that do not meet the above requirement and have an AQL of 1.5 or lower.

EN 511



ABC

Cold Protection

This standard applies to any gloves that protect the hands against convective and contact cold down to -50°C. Protection against cold is expressed by an icon followed by a series of three performance levels relating to specific protective qualities.

Performance Levels	1	2	3	4	5
A. Convective cold Thermal insulation ITR in m ² .°C/W	I < 0.10	0.10 < I < 0.25	0.15 < I < 0.22	0.22 < I < 0.30	0.30 <
B. Contact cold Thermal resistance R in m ² .°C/W	R < 0.025	0.025 < R < 0.050	0.050 < R < 0.100	0.100 < R < 0.150	0.150 < R
C. Water penetration test	Fail	Pass	-	-	-

EN 388



ABCD

Mechanical Protection

This standard applies to all kinds of protective gloves with respect to physical and mechanical aggressions caused by abrasion, blade cut, puncture and tearing. Protection against mechanical hazards is expressed by an icon followed by four numbers (performance levels), each representing test performance against a specific hazard.

Performance Levels	0	1	2	3	4	5
A. Abrasion Resistance (cycles)	<100	100	500	2,000	8,000	-
B. Blade Cut Resistance (index)	<1.2	1.2	2.5	5.0	10.0	20
C. Tear Resistance (newton)	<10	10	25	50	75	-
D. Puncture Resistance (newton)	<20	20	60	100	150	-

EN 407



ABCDEF

Heat Protection

This standard specifies thermal performance for protective gloves against heat and/or fire. The nature and degree of protection is shown by an icon followed by a series of six performance levels, relating to specific protective qualities.

Performance Levels	1	2	3	4
A. Resistance to flammability (seconds)	< 20 s no requirement	< 10 s < 120 s	< 3 s < 25 s	< 2 s < 5 s
B. Contact heat (contact temperature & threshold temperature)	100°C > 15 s	250°C > 15 s	350°C > 15 s	500°C > 15 s
C. Convective heat (heat transfer delay)	> 4 s	> 7 s	> 10 s	> 18 s
D. Radiant heat (heat transfer delay)	> 5 s	> 30 s	> 90 s	> 150 s
E. Small drops molten metal (# drops)	> 5	> 15	> 25	> 35
F. Large quantity molten metal (mass)	30 g	60 g	120 g	200 g