UNDERSTANDING EN 388

Everything you need to know about the standard for **mechanical protection gloves**

MAPA® PROFESSIONAL

The future is in our hands

WHAT IS **EN 388**?

EN 388 is the European standard that specifies requirements for protective gloves against **mechanical hazards**, such as **abrasion**, **cut**, **tearing**, **puncture** and, optionally, **impact**.

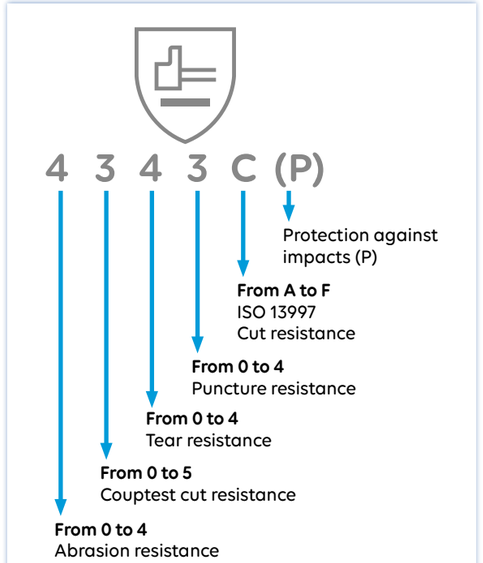
This standard helps safety managers and workers choose the right glove for each application by providing clear and measurable performance indicators.

HOW TO READ THE EN 388 MARKING

Each mechanical protection glove tested under EN 388 is marked with performance levels (number or letter) **under the pictogram**.

These performance levels consist of up to six characters, each indicating the performance level in a **specific test.**

An "X" indicates that the test was not performed or is not applicable.



EN 388: UNDERSTANDING THE TESTS

To be certified under EN 388, gloves undergo **standardised tests for mechanical hazards**. For abrasion, cut, tear and puncture resistance, glove **samples** are taken from the **palm area**—the most exposed zone. In contrast, the impact test (where applicable) is performed on the back of the glove.

WHAT ARE THE KEY TESTS BEHIND THE MARKING?

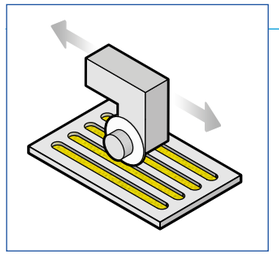
ABRASION RESISTANCE

This test counts how many cycles the glove sample can withstand when rubbed against standardised abrasive paper under controlled pressure.

What does the test simulate? Repeated friction and wear from handling rough surfaces or tools, especially in construction, manufacturing, or logistics tasks.

4 3 4 3 C (P)

Performance level: Rated from **Level 0 (low) to Level 4 (high).**



COUPTEST CUT RESISTANCE

For this test, a circular blade moves back and forth across the glove under a fixed pressure (5 Newtons, or 500 g) until it cuts through. The number of cycles determines the **cut index.**

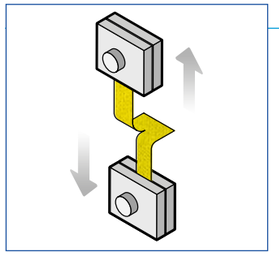
What does the test simulate? Used to assess resistance to low-energy cuts of gloves in repeated contact with sharp objects.

4 3 4 3 C (P)

Performance level: Rated from **Level 0 to 5** or marked "X" if not applicable.

Limitations

This test struggles with **high-cut resistant materials** like glass or steel fibre, as these can **dull** the blade. In such cases, Mapa Professional chooses to indicate an "X" in the marking and to refer instead to the blade cut resistance test, which becomes mandatory in those cases.



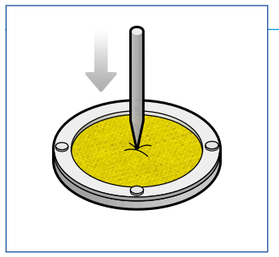
TEAR RESISTANCE

This test measures the amount of force needed to tear apart a pre-nicked glove sample.

What does the test simulate? It simulates resistance to snags or rips on sharp edges or metal parts common in industrial environments.

4 3 4 3 C (P)

Performance level: Rated from **Level 0 to 4.**



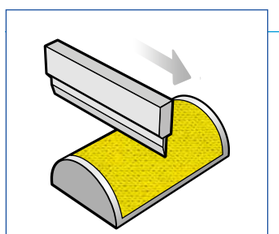
PUNCTURE RESISTANCE

This test measures the force required to perforate the glove using a standardised pointed stylus.

What does the test simulate? It represents typical hazards such as nails, wire ends, or sharp splinters that can penetrate lower-resistance gloves.

4 3 4 3 C (P)

Performance level: Rated from **Level 0 to 4.**



BLADE CUT RESISTANCE (ISO 13997)

For this test, a straight blade makes a single cut across the glove with increasing force. The result is the **Newtons** required to cut through over a 20 mm stroke.

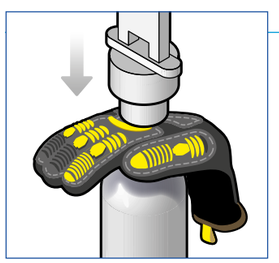
What does the test simulate? It simulates real workplace hazards involving sharp or heavy objects, such as accidental contact with sharp or sliding items, or handling heavy, edged materials.

4 3 4 3 C (P)

Performance level: Rated from **Level A (low) to Level F (very high)**. Mapa Professional provides precise Newton values for cut resistance in the product technical datasheet.

Did you know?

This test provides a more **precise** rating for gloves made with **highly-cut resistant materials**. A glove previously rated Level 5 under Couptest may now be classified as C, D, E or F under ISO 13997.



IMPACT PROTECTION

Impact protection for gloves is tested according to EN 13594 where a **5-joule impact** is applied to the glove. The amount of force that passes through the glove is measured. To meet the standard, the **transmitted force must be ≤ 7 kN.**

What does the test simulate? It assesses protection against blunt force trauma, such as falling tools or heavy knocks for example, where there is a risk of bruising or hand injury.

4 3 4 3 C (P)

Performance level: Gloves that pass the test are **marked** with an additional **P**.

EN 388: SUMMARY TABLE OF PERFORMANCE LEVELS

These **performance levels** should be visible **below the pictogram** of the **EN 388** norm on the gloves in their individual packaging.

PERFORMANCE LEVEL RATINGS	1	2	3	4	5
ABRASION Resistance (Cycles)	100	500	2000	8000	-
COUPTEST CUT Resistance (Index)	1.2	2.5	5.0	10.0	20.0
TEAR Resistance (Newtons)	10	25	50	75	-
PUNCTURE Resistance (Newtons)	20	60	100	150	-

PERFORMANCE LEVEL RATINGS	A	B	C	D	E	F
BLADE CUT Resistance (Newtons)	2 - 5	5 - 10	10 - 15	15 - 22	22 - 30	>30
IMPACT Resistance	PASS (P) or FAIL (no marking)					

UNDERSTANDING EN 388 MARKING: 2 EXAMPLES WITH MAPA PROFESSIONAL GLOVES

KRYTECH 694

EN 388

4X42D

ISO 13997: 18N (1835g)

PERFORMANCE LEVEL RATINGS	
ABRASION Resistance	4
COUPTEST CUT Resistance	X*
TEAR Resistance	4
PUNCTURE Resistance	2
BLADE CUT Resistance	D
IMPACT Resistance	-

High cut-resistant glove delivering exceptional dexterity for demanding tasks—such as steel installation and metal parts handling.

EXONIT 852

EN 388

3X21XP

PERFORMANCE LEVEL RATINGS	
ABRASION Resistance	3
COUPTEST CUT Resistance	X*
TEAR Resistance	2
PUNCTURE Resistance	1
BLADE CUT Resistance	X*
IMPACT Resistance	P

Impact-resistant glove delivering dexterity for heavy-duty tasks without cut hazards—such as outdoor handling of heavy parts and other demanding applications.

*An **X** in the marking means that the test was not performed or is not applicable for this glove.

There are a variety of risks depending on the environment.
Mapa Professional provides you with a complete range of protective gloves.
Please visit our website mapa-pro.com

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