



# EN 388 STANDARD

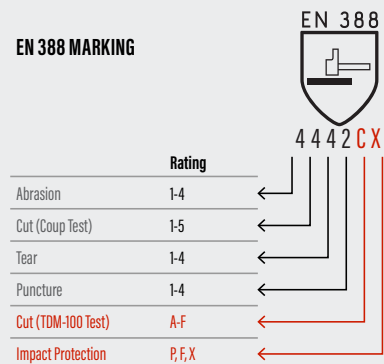
FOR PROTECTIVE GLOVES AGAINST MECHANICAL RISKS (2016 EDITION)

## What is the EN 388: 2016 Standard?

EN 388 is a European safety standard for protective work gloves, providing comprehensive assessment for their resistance to mechanical risks in a work environment. The standard evaluates gloves based on their performance against abrasion, cut, tear, puncture, and impact, ensuring that users can select the appropriate hand protection for various industrial and occupational hazards. Following EN388 guidelines ensures that both manufacturers and users can have confidence in the reliability and safety of their hands whilst carrying out work.

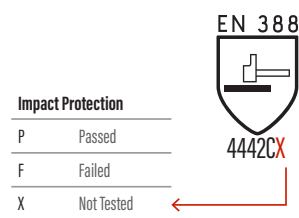
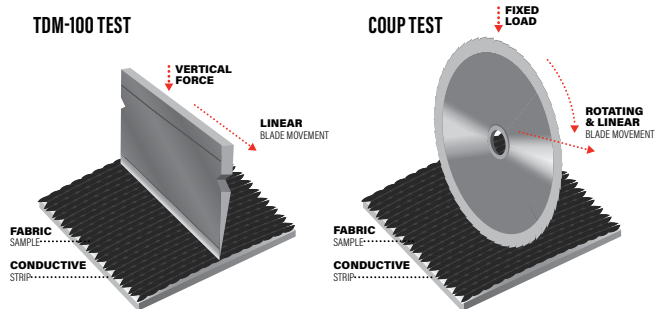
## EN 388 2016 Standard

Currently, on many cut resistant gloves sold in North America, you will find the EN 388 marking. The EN 388, similar to ANSI/ISEA 105, evaluate the mechanical risks for hand protection. Gloves with an EN 388 rating are third party tested for abrasion, cut, tear, puncture and impact resistance. Cut resistance is rated 1-5 while all other physical performance factors are rated 1-4. Up until 2016, the EN 388 standard used only the "Coup Test" to test for cut resistance. The current standard uses both the "Coup Test" and the "TDM-100 Test" to measure cut resistance for a more accurate score. Also included in the standard is an Impact Protection test.



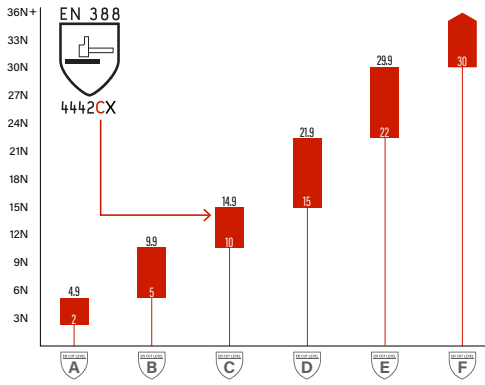
## Two Testing Methods for Cut Protection

After many years of using various testing methods for hand protection, it was discovered that the blade in the "Coup Test" would dull quickly when testing yarns with high levels of glass and steel fibers. This led to unreliable cut scores, highlighting the need for the inclusion of the "TDM-100 Test" to incorporate the EN 388 standard to ensure more accurate hand protection assessments.



## Impact Protection Testing for Maximum Safety

The EN 388 2016 standard also includes an impact protection test. This test is intended for work gloves designed for ultimate hand protection against impact. Gloves that don't offer impact protection, will not be subjected to this test. For this reason, there are three potential ratings that will be given, based on this performance test, P (pass), F (fail) or X (not tested).



EN 388 RATING	RANGE (NEWTONS)	CONVERTED RANGE (GRAMS)	ANSI/ISEA 105 LEVEL	RANGE (GRAMS)
A	2 - 4.9	204 - 508	A1	200 - 499
B	5 - 9.9	509 - 1,019	A2	500 - 999
C	10 - 14.9	1,020 - 1,529	A3	1,000 - 1,499
D	15 - 21.9	1,530 - 2,242	A4	1,500 - 2,199
E	22 - 29.9	2,243 - 3,058	A5	2,200 - 2,999
F	30+	3,059+	A6	3,000 - 3,999
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## Understanding the ISO 13997 Test Method (TDM-100 Test) for Superior Cut Protection

To differentiate between the two cut scores that are generated under the EN 388 2016 standard, the cut score achieved using the ISO 13997 test method has a letter added to the end of the first four digits. The letter assigned is dependent upon the result of the test, which is given in Newtons. The table to the left outlines the alpha scale used to calculate the results from the ISO 13997 test method.

## How PIP® Cut Resistant Gloves Meet EN 388:2016 and ANSI/ISEA 105-2016 Standards

PIP® has been testing all of its cut resistant gloves with the TDM-100 machine since 2005, which is (and has been) compliant with this test method, enabling us to easily convert to the EN 388 2016 standard. The table to the left illustrates how the EN 388 2016 standard is in-line with the ANSI/ISEA 105 standard for cut resistance when converting Newtons to grams.

## EN 388: 2016 Certification for Easy Identification

All PIP® hand protection products are third party tested to EN 388 2016 with the shield clearly printed on the back of each glove for easy identification.



## Frequently Asked Questions

### Are EN 388 and ANSI 105 ratings directly comparable?

No, not directly. EN 388 and ANS 105 are not equivalent and cannot be compared as such due to the various testing methods used within each standard. To gain a better understanding of each test, reference our [EN 388 vs ANSI/ISEA 105 Comparison Guide](#).

### How do I interpret the test results for gloves under EN 388 and ANSI 105?

Look for the specific ratings (i.e., 4 for abrasion resistance in EN 388 or A3 for cut resistance in ANSI 105) and consider how they align with the tasks and hazards your workers face. Higher ratings generally indicate better protection.

### Which standard should I follow for selecting gloves?

This depends on your region and specific requirements. While most gloves sold in the US will have both markings, EN 388 is widely used in Europe and many other parts of the world, while ANSI 105 is commonly used in North America. Understanding local regulations and job-specific risks can help determine which standard to prioritize.

### More questions?

Contact us and a PIP® hand protection expert will gladly assist in giving you a better understanding of how these standards can help employers and workers make informed decisions when selecting gloves to ensure adequate hand protection in various occupational settings.