Changes to EN388 and what new glove markings will mean

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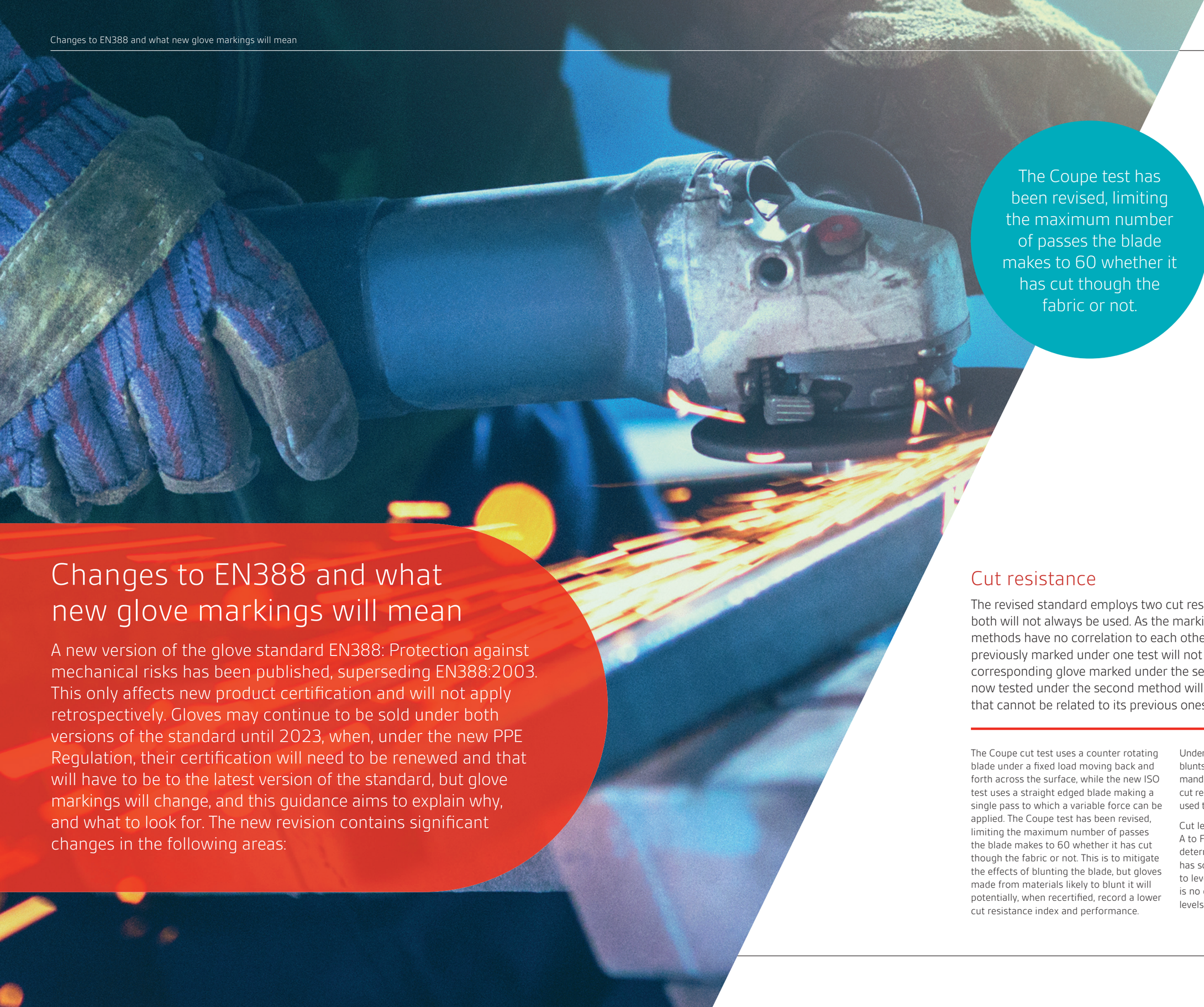


Changes to EN388 and what new glove markings will mean

A new version of the glove standard EN388: Protection against mechanical risks has been published, superseding EN388:2003. This only affects new product certification and will not apply retrospectively. Gloves may continue to be sold under both versions of the standard until 2023, when, under the new PPE Regulation, their certification will need to be renewed and that will have to be to the latest version of the standard, but glove markings will change, and this guidance aims to explain why, and what to look for. The new revision contains significant changes in the following areas:

The Coupe test has been revised, limiting the maximum number of passes the blade makes to 60 whether it has cut though the fabric or not.

Cut resistance

The revised standard employs two cut resistance test methods, but both will not always be used. As the markings resulting from the two methods have no correlation to each other a user whose glove was previously marked under one test will not easily be able to identify a corresponding glove marked under the second, and the same glove now tested under the second method will have different markings that cannot be related to its previous ones.

The Coupe cut test uses a counter rotating blade under a fixed load moving back and forth across the surface, while the new ISO test uses a straight edged blade making a single pass to which a variable force can be applied. The Coupe test has been revised, limiting the maximum number of passes the blade makes to 60 whether it has cut though the fabric or not. This is to mitigate the effects of blunting the blade, but gloves made from materials likely to blunt it will potentially, when recertified, record a lower cut resistance index and performance.

Under the new method if the sample blunts the blade during the 60 passes it is mandatory to then test it using the ISO 13997 cut resistance method, and this is the result used to assess the gloves' performance.

Cut levels under the ISO test are defined A to F, increasing in levels of protection determined by the force applied. Level E has sometimes been said to correspond to level 5 but the new EN388 states there is no correlation between the Coupe test levels and ISO test levels.

Why are these changes being proposed?

Those revising the standard felt that if the blade is blunted while the Coupe test is proceeding the result is no longer representative of the actual degree of protection, and the ISO test will provide a better indication, improving the information given to the user.

However, this additional information could potentially lead to confusion if these changes and their implications are not clearly understood. When certifying products, manufacturers can choose to use either or both tests. The ISO cut test is only mandatory when blunting occurs during the Coupe method. Then the manufacturer still has an option to display the Coupe test result but this is indicative only, whilst the displayed ISO result is the reference cut performance, and a statement to this effect must be included in the user information.

The BSIF and its members believe this will be confusing for users and specifiers. The British Standards Institute, the UK's National Body for Standards, agrees and will insert a National Annex in the BS version of the revised standard which states "It is important to note that the opinion of the UK committee is that, should the Coupe test be performed and the sample proven to blunt the blade as defined within the standard, the result from this test should not be visible to end users. This is because doing so could lead to misinformation as it has been proven that the test is not applicable to this type of material. Instead the second position should be replaced with an 'X' to show this."

Cut Resistance Options Chart

This chart shows the options available for fulfilling the cut resistance requirements with examples of appropriate marking.

Option A: Coupe with mandatory or optional ISO cut method

Manufacturer decides to use the Coupe test and obtains a cut level of 4

→ Does blunting occur?

→ Glove should display a score of 4 in the second position and X in the fifth, e.g. 4.4.2.3.X

→ ISO test to be used also?

→ ISO test in this example achieves a level C

→ **Possible Manufacture position**

The glove can display a score of 4 in the second position and C in the fifth position,

e.g. 4.4.2.3.C

↓ Manufacturer must now use the ISO test. The glove scores a level C

↓ Quote Coupe result?

→ **European Committee position**

Glove should display a score of 4 in the second position and C fifth position,

e.g. 4.4.2.3.C

Note: User information notice should state the Coupe results are indicative, the ISO result is the reference

← **UK Committee Position**

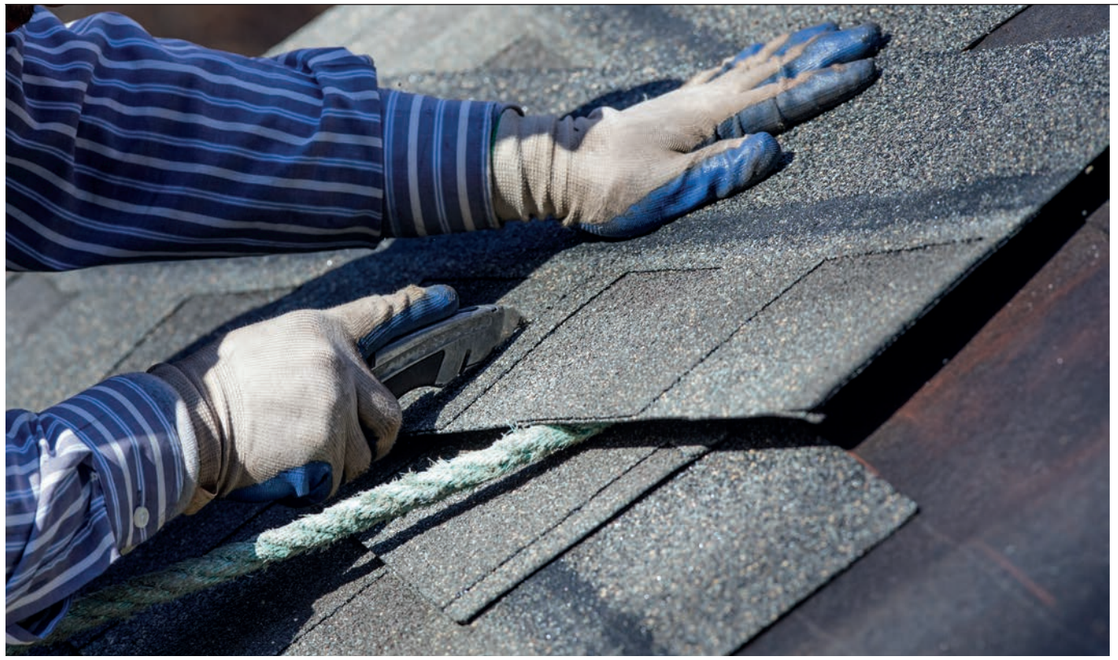
Glove should display a score of C in the fifth position and X in the second,

e.g. 4.X.2.3.C

NOTE – Both the gloves above would display the same EN388 code, however one has blunted the Coupe test blade and relies on the user to read the instructions for use and differentiate between the products.

Option B: ISO method only

Manufacturer decides to use ISO test only for cut resistance → On testing the glove achieved a score of C → The glove will display an X in the second position and C in the fifth e.g.4.X.2.3.C



BSI is proud to be co-producing this guidance, the first of its kind between BSI and BSIF

2016 saw a lot of press coverage relating to the revision of the European Protective Gloves standard, BS EN 388. The newly updated version is the first major revision of the standard since 2003. The scope states that this standard '*...specifies requirements, test methods, marking and information to be supplied for protective gloves against the mechanical risks of abrasion, blade cut, tear, puncture and, if applicable, impact'.*

The major changes have been outlined by BSIF and BSI encourages industry to use the standard to help promote health and safety in the workplace. With more than 30 million working days being lost in 2015/16 due to work-related illness and workplace injury (according to recently published HSE statistics) it is vital that manufacturers of gloves give workers the optimum level of protection, dependent on the job they are doing.

This standard is very much in line with BSI's promotion of health and safety. If you would like to find out more, download a copy of our brochure here.

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Other changes

Impact protection

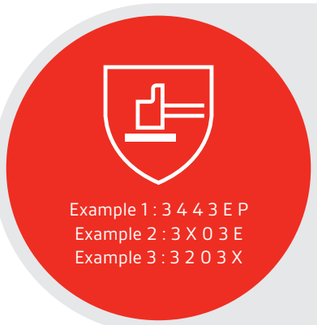
Manufacturers have an option to design gloves to offer protection against impacts. These gloves have a letter P after their other markings to show they have been tested to section 6.6 of EN 13594:2015 and conform to Level 1, Table 7 (Protective gloves for motorcycle riders).

Abrasion resistance

The specification of the abrasive paper used in the abrasion resistance test has changed. This revision, along with a number of additional minor changes to test materials, means that it is possible some abrasion scores may change when a product is recertified under the new test conditions.

Marking changes

Examples of the new glove marking system are given below. They include two new elements relating to the ISO cut method and the optional impact protection.



Example	N°1	N°2	N°3
Abrasion (6.1)	level 3	level 3	level 3
Cut (6.2)	level 4	test not performed or not applicable	level 2
Tear (6.4)	level 4	level 1 not achieved	level 1 not achieved
Puncture (6.5)	level 3	level 3	level 3
Cut (6.3)	level E	level E	test not performed
Impact protection	achieved	test not performed	test not performed

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