



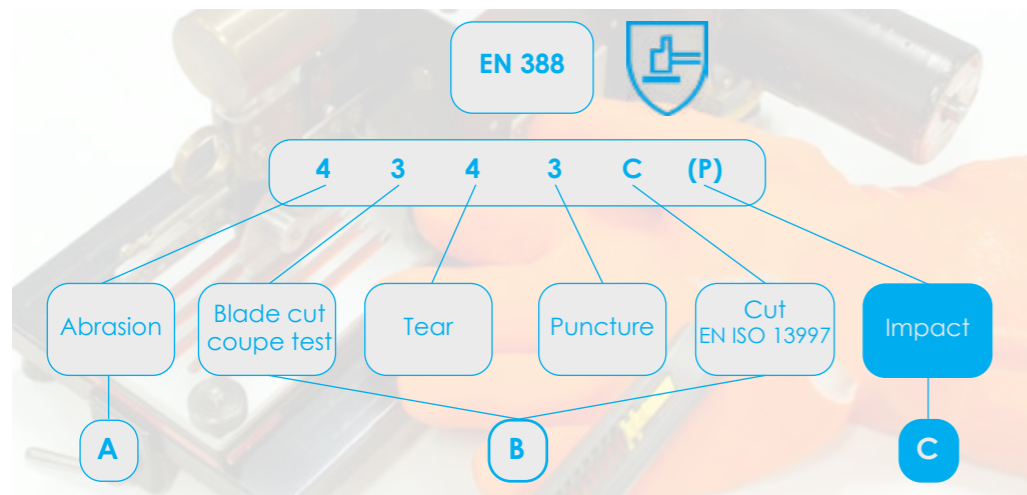
EN388:2016+A1:2018 Standard

Personal Protective Equipment
PROTECTIVE GLOVES COMMISSION

SYNAMAP

The 2016 version and its 2018 addendum are applicable. Let's understand them in details.

1. The information given with the pictogram



A. ABRASION RESISTANCE

The test is performed using a more reliable abrasive paper.

Circular specimens of material are abraded under known pressure. The resistance to abrasion is measured by the number of rubs required for breakthrough to occur.

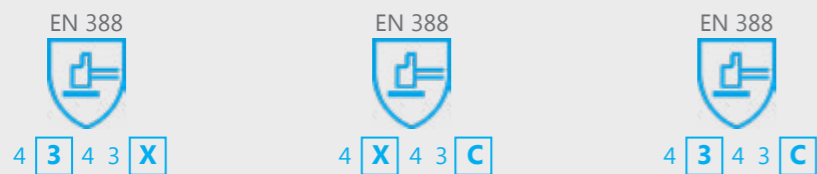
B. CUT RESISTANCE

A new test has to be performed if the usual test (Coupe-test) is found not to be reliable. This applies to high cut resistant gloves which dull the blade during the cut test, thus providing wrong results.

Case 1

In the regular case, for all gloves that do not dull the Coupe-test blade, and for which less than 60 cycles are needed to cut the sample, the manufacturer may either perform the Coupe-test, the EN ISO 13997 test or both tests.

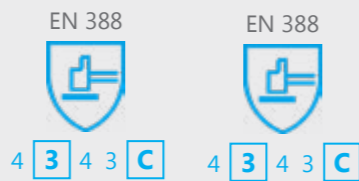
Examples for case 1



Case 2

In case of blade dulling, the Coupe-test is not reliable. In such case, the EN ISO 13997 test method must be performed as the reference test method and the performance letter is indicated. The manufacturer decides whether he wants to provide the Coupe-test performance level on a voluntary basis.

Possible markings as examples for Case 2

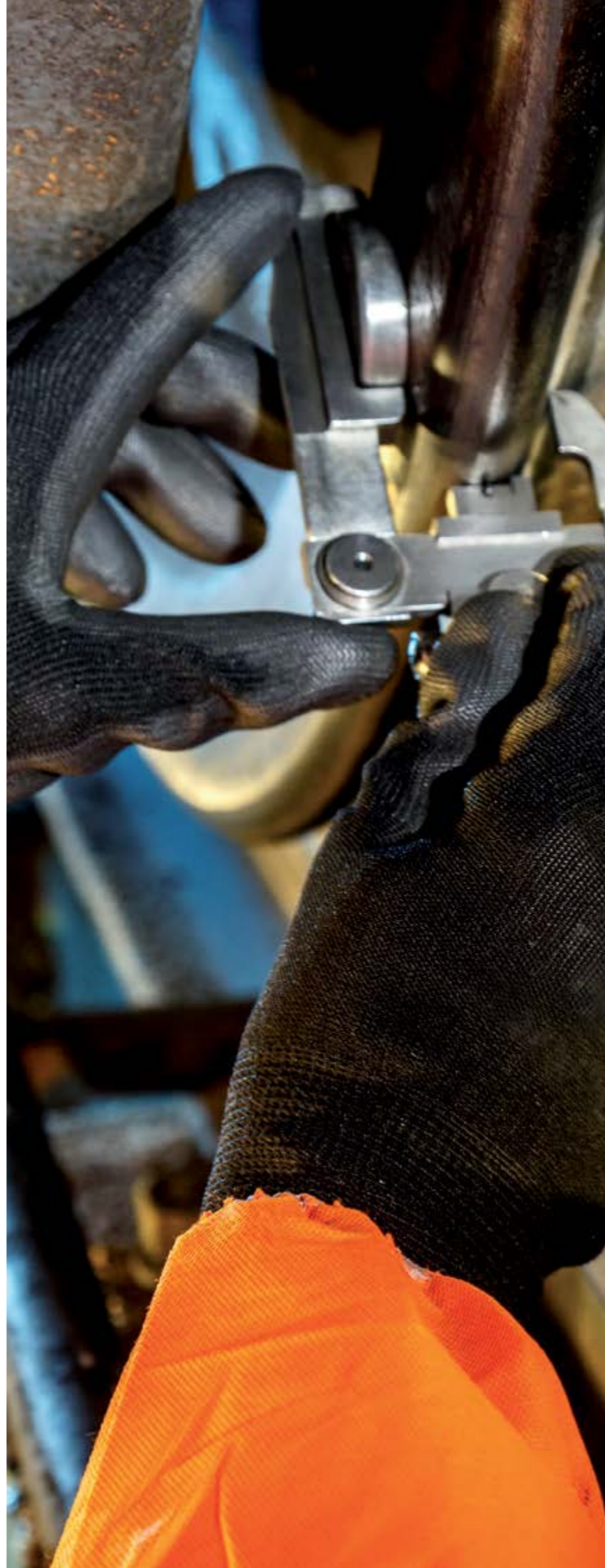


If the manufacturer marks the Coupe-Test level, the user notice shall indicate the following:

- The Coupe-test results are only indicative
- The EN ISO 13997 test results provide the reference performance level

Note: the impact test is not claimed in these examples.

The information given on cut resistance of the gloves is different, although the gloves remain the same in quality.



C. IMPACT RESISTANCE

This test enables to claim protection against impacts.

The test shall be performed according to the EN 13594 standard (standard on protective gloves for motorcycle riders). The glove must reduce the effect of impact on the hand. Thus the requirement is that a 2.5kg mass with a 5 Joules energy falling on the glove shall transmit a force that does not exceed 7kN.

Provided the test is performed and the requirement is achieved, the letter P may be affixed in last position to the series of performance levels.

The information leaflet from the manufacturer must also indicate:

- The parts of the gloves that are effectively concerned by this protection
- A warning that this protection does not apply to the fingers

If the test is not claimed or if the performance level is not passed, no letter P may appear with the pictogram.

2. Reminding the tests and performance levels

Performance level (value : more or equal to)						
Test	Level 1	Level 2	Level 3	Level 4	Niveau 5	
Abrasion resistance (number of cycles)	100	500	2 000	8 000	-	
Cut resistance Cup test (index)	1,2	2,5	5,0	10,0	20,0	
Tear resistance (Newton)	10	25	50	75	-	
Puncture resistance (Newton)	20	60	100	150	-	
Performance levels	Level A	Level B	Level C	Level D	Level E	Level F
Cut resistance EN ISO 13997 (Newton)	2	5	10	15	22	30
Performance	- (no letter)			P		
Impact resistance	Fail or not claimed			Pass		

0 : lower than level 1
X : test not performed or not applicable

3. How to apply the EN 388:2016+A1:2018 standard?

Since this revised standard was published by the OJ of the EU (Official Journal of the Union), it must be used to certify any new product.

For existing products it must be used when the certification needs to be renewed.

4. If you need more information :

EN388:2016+A1:2018 is available to be bought through the Standardization Body of your country eg. AFNOR for France : www.boutique.afnor.org/



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