

DESIGNED
TO PROTECT

FORCE
360™

A FIRST IN CERTIFICATION

Force360 have certified their complete range of Mechanics and Synthetic gloves to Australian Standards AS/NZS 2161.2 and AS/NZS 2161.3, and European Standards EN420:2003+A1:2009 and EN388:2016

Unknown to most people, gloves in Australia are almost always sold as compliant to Australian or European Standards. They may show the 'CE' mark and mechanical score and symbol like 'EN388 4542F' . They may state in their literature 'Compliant to European Standards' or 'meets European Standards'. They may also print AS/NZS 2161.3 on the glove as a way of claiming the glove is standards approved.

This is NOT the same as being certified to any standard.

Unfortunately, compliant gloves with these markings require no proof or validation from the glove manufacturer that they are accurate.

For Force360 this is not acceptable. Hand injuries are commonplace, and simply making compliance claims is just not enough to guarantee a glove's mechanical score, or it's protection levels.

Asking a trusted and independent notifying body to certify the glove's mechanical performance, guarantees that the scores are accurate, and the gloves actually meet the minimum requirements of the relevant standard(s).

Force360 has entrusted the **Notifying Body BSI Group**, a world's leading Standards Certifier to ensure that all mechanical scores are validated. This certification process ensures manufacturing processes and facilities, test certificates, and the product itself are audited & scrutinized so that all claims are accurate. The notifying body in affect becomes a gatekeeper of hand protection for the wearer.

Force360's entire hand protection range is certified by BSI Group to the latest Australian Sand European standards.

Certified products must show the Notifying Body's logo, and the license number they have issued the manufacturer, as the standards and performance mechanical scores the glove meets.

CE
2797
CE 719275

CERTIFIED PRODUCT



Australian Standard
AS/NZS 2161.2:2005
AS/NZS 2161.3:2005
Lic. BMP 719027

AUSTRALIAN STANDARDS

Force360 holds AS/NZS 2161.2 (EN420:2003) Certification which tests for the following:

Innocuousness - This test ensures gloves are free from any dangerous chemicals or substances that may harm the wearer. PH and chromium levels must also fall within specified parameters. Every component material must be tested.

Finger Dexterity - Critical for wearer productivity and wearer safety. Dexterity must be within specific parameters.

Sizing & Fit - Critical for wearer comfort, productivity and ultimately wearer safety.

Product markings and Instructions - The wearer of the gloves should always know as much as possible about the glove they are about to wear and use. Instructions on how to use the gloves correctly along with care instructions and limitations are all included.

- ✓ **Certified Protection** - Mechanical Claims
- ✓ **Certified Non Toxic** - Skin Friendly Materials
- ✓ **Certified Sizing** - Fit, Comfort, Consistency
- ✓ **Certified Factory** - Audited Product Certainty
- ✓ **Certified Dexterity** - Fit for Purpose

Force360 holds AS/NZS 2161.3 (soon to be EN388:2016) Certification which tests for the following:

Mechanical Scores - Abrasion resistance, blade cut, tear and puncture resistance are all tested and then certified. Unlike a stand-alone test certificate that are often produced by glove suppliers so they can claim EN388 compliance, Force360's mechanical scores are tested in an international accredited test lab and then further validated by BSI Group so you know they are 100% accurate.

With gloves that are not certified, how do you really trust their claim?

In summary, a Cut 5 glove from Force360 is just that - Cut 5.

CERTIFIED PRODUCT



Australian Standard
AS/NZS 2161.2:2005
AS/NZS 2161.3:2005
Lic. BMP 719027

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EUROPEAN STANDARDS - EN388 2016  X X X X X X

ABRASION

Number of cycles a glove can withstand to abrade through the material.

A pre-defined sandpaper grit will be used as abradant to conduct the test providing more consistent results.

If this test is not carried out it is recorded with an 'X'.

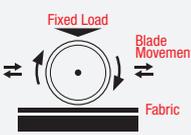
CYCLES	LEVEL
>8000	4
>2000	3
>500	2
>100	1
<100	0

CUT-COUP

EN388 : 2016

Number of cycles to cut through a glove material at a constant speed and pressure when compared to a cotton reference.

The blade is tested for any blunting after 60 cycles. If the blade is blunted after 60 cycles and no breakthrough is evident or if this test is not carried out it is recorded with an 'X'.



CUT INDEX	LEVEL
>20	5
>10	4
>5	3
>2,5	2
>1,2	1
<1,2	0

TEAR

The force a glove's material can withstand before it is torn apart.

If this test is not carried out it is recorded with an 'X'.

NEWTON	LEVEL
>75	4
>50	3
>25	2
>10	1
<10	0

PUNCTURE

The force a glove's material can withstand before it is perforated using a standard size needle.

If this test is not carried out it is recorded with an 'X'.

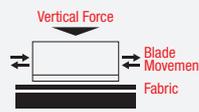
NEWTON	LEVEL
>150	4
>100	3
>60	2
>20	1
<20	0

CUT-TDM

EN ISO 13997

Amount of pressure required to make an incision over a 20mm travel distance using a razor sharp blade.

If this test is not carried out it is recorded with an 'X'.



NEWTON	LEVEL
>30	F
>22	E
>15	D
>10	C
>5	B
>2	A

IMPACT EN13594:2015

EN13594:2015

Resistance to a 2.5kg weight impacting with an energy of 5J (Joules) onto the glove. The material may not fracture or split and is measured in accordance with EN13594:2015 as either Pass (P) or Fail (F).

If this test is not carried out it is recorded with an 'X'.

KN	LEVEL
<9	P
>9	F

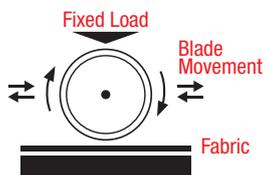
Currently, on many cut resistant gloves sold in Australia, you will find the EN388 marking. The EN388 is the European standard used to evaluate mechanical risks for hand protection. Gloves with an EN388 rating are third party tested, and rated for abrasion, cut, tear, and puncture resistance. Cut resistance is rated 1-5, while all other physical performance factors are rated 1-4. Up until now, the EN388 standard used only the "Coup Test" to test for cut resistance. The new EN388:2016 standard uses both the "Coup Test" and the "TDM-100 Test" to measure cut resistance for a more accurate score. Also included in the updated standard is a new Impact Protection test.



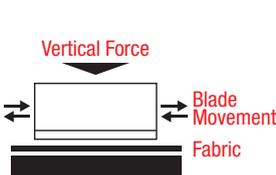
Make a more informed and safer glove choice.

Two methods measuring Cut Protection

Coup Test



TDM-100 Test



As discussed above, the most significant change to the EN388:2016 standard is the formal inclusion of the ISO 13997 cut test method. ISO 13997, also known as the "TDM-100 Test", is similar to the ASTM F2992-15 test method used in the ANSI 105 standard. Both standards will now make use of the TDM machine with the sliding blade and weights. After many years with differing testing methods it was found that the blade used in the "Coup Test" would dull quickly when testing yarns with high levels of glass and steel fibres. This resulted in unreliable cut scores, so the need for including the "TDM-100 Test" to the new EN 388 2016 standard was strongly supported.

Understanding the ISO 13997 Test Method (TDM-100)

- LEVEL F** ▶ 30+ N
- LEVEL E** ▶ 22N - 29.9N
- LEVEL D** ▶ 15N - 12.9N
- LEVEL C** ▶ 10N - 14.9N
- LEVEL B** ▶ 5N - 9.9N
- LEVEL A** ▶ 2N - 4.9N

To differentiate between the two cut scores that will be generated under the new EN 388 2016 standard, the cut score achieved using the ISO 13997 test method will have a letter added to the end of the first four digits. The letter assigned will depend on the result of the test, which will be given in Newtons. The table above outlines the new alpha scale used to calculate the results from the ISO 13997 test method.

The new Impact Test

EN388



XXXXXX

IMPACT PROTECTION

- P - PASSED
- F - FAILED
- X - NOT TESTED

The updated EN388:2016 standard will also include an impact protection test. This test is intended for gloves designed for protection against impact. Gloves that do not offer impact protection will not be subjected to this test. For that reason, there are three potential ratings that will be given, based on this test.