NEW CUT ANSI / EN 388 STANDARDS

CUT ANSI / EN 388 STANDARDS

CUT-X

BOBDALEGLOVES.COM

BDG® BOB DALE GLOVES

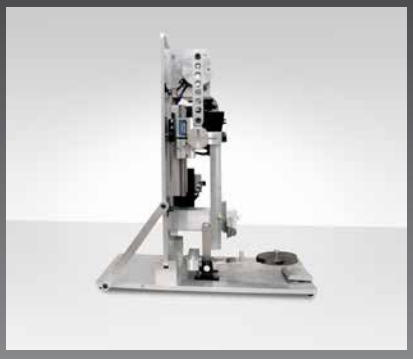
CUT TEST MACHINES

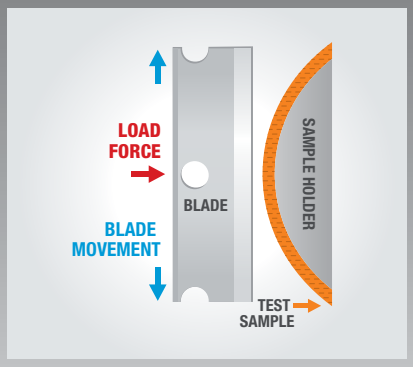
NEW CUT ANSI / EN 388 STANDARDS

5 CUT TESTS
3 CUT TEST MACHINES

Testing standards for cut resistant gloves have changed for EN 388 and ANSI. Both now use the same measuring device, the TDM-100 machine, resulting in more comparable data between the two standards (EN 388 ISO 13997 & ANSI ASTM F2992-15). TDM tests the amount of weight (grams/newtons) necessary for a blade to cut through material. This test method provides greater accuracy than the previous EN 388 Coup test, and has the ability to test higher cut materials and provide a larger range of precision results. To mitigate the dulling of the rotating blade which can provide inconsistent results, the new EN 388:2016 Coup test has been revised to limit the number of test passes to 60 cycles to cut the fabric - then a new blade is required.

CPPT Cut Test: ANSI

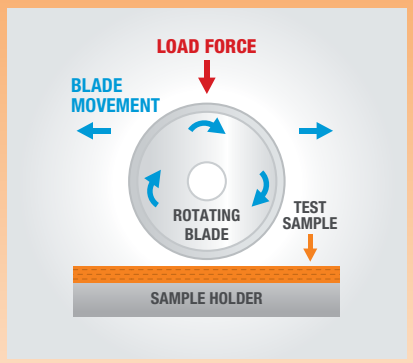




OLD ANSI: CPPT

ANSI 4 CUT

COUP 2003 2016: EN 388



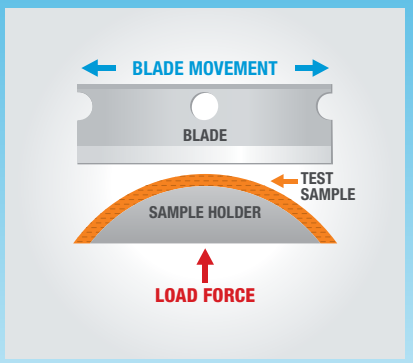
OLD EN 388: 2003 COUP

EN 388 4544

NEW EN 388: 2016 COUP

EN 388 4544C

TDM-100: EN 388 / ANSI



NEW EN 388: 2016 TDM-100

EN 388 4544C

NEW ANSI: TDM-100

ANSI A4 CUT

The above information is for educational purposes only. For the most accurate and up-to-date information please consult your respective governing bodies (ANSI/ISEA 105-2016 and/or EN 388 2016).

European Standards

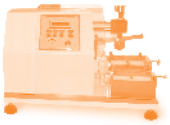
NEW CUT ANSI / EN 388 STANDARDS

Measurements completed in **Newtons**

OLD MARKINGS

EN 388: 2003

COUP TEST



EN 388

4 5 4 4

- **Abrasion** Resistance **0-4** Rating
- **Cut** (Old Coup Test) **0-5** Rating
- **Tear** Resistance **0-4** Rating
- **Puncture** Resistance **0-4** Rating

COUP TEST:

Levels 1 to 5

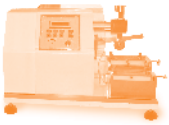
(Lowest to highest level of cut resistance)

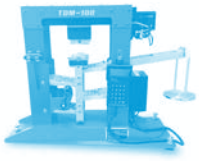
Blade is re-used for each cut, but not for each test.

NEW MARKINGS

EN 388: 2016

COUP TEST TDM-100 TEST





EN 388

4 5 4 4 D P

- **Abrasion** Resistance **0-4** Rating
- **Cut** (New Coup Test) **0-5** Rating
- **Tear** Resistance **0-4** Rating
- **Puncture** Resistance **0-4** Rating
- **Cut (TDM Cut Test)** **A-F** Rating
- **Impact** Protection **P** (P, F, or X)

COUP TEST:

Levels 1 to 5

New blade is required after 60 cycles if the blade has not cut through the test fabric.

TDM-100 TEST:

Levels A to F

New blade is required for each cut.

IMPACT PROTECTION TEST:

An impact protection test is part of the new EN 388: 2016 standard intended for hand protection specifically designed for protection against impact - gloves that do not offer impact protection will not be subjected to this test.

*There are three potential ratings: Pass (**P**), Fail (**F**), or Not Tested (**X**).*

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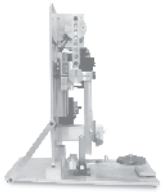
ANSI
American National Standards Institute

NEW CUT ANSI / EN 388 STANDARDS

Measurements completed in **Grams**

OLD MARKINGS

ANSI
CPPT TEST



ANSI
4
CUT

CPPT TEST:
Levels 1 to 5 (Lowest to highest level of cut resistance)

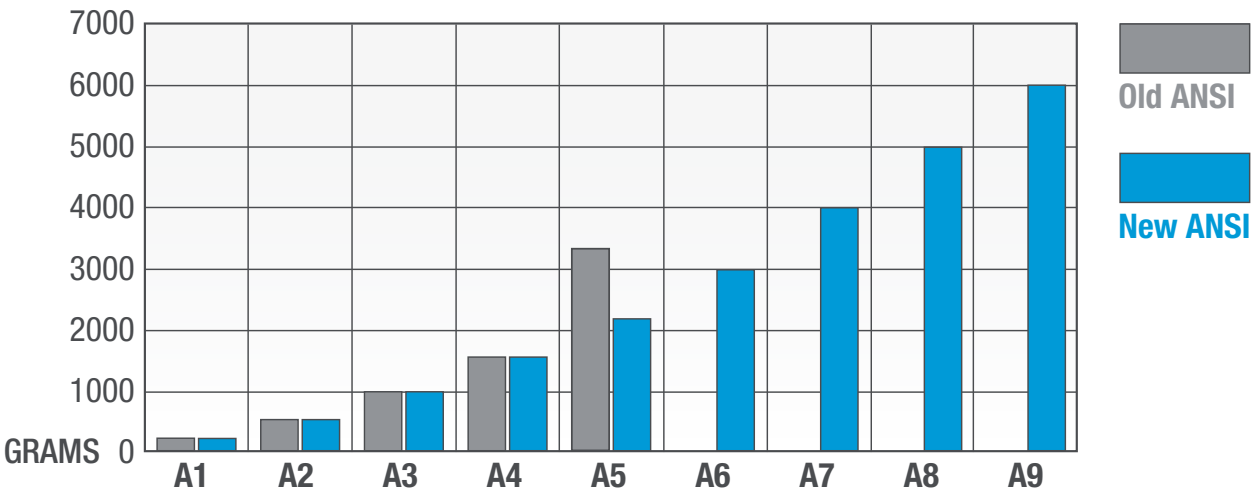
NEW MARKINGS

ANSI
TDM-100 TEST

ANSI
A4
CUT

TDM-100 TEST:
Levels A1 to A9 (Lowest to highest level of cut resistance)
New blade is required for each cut.

COMPARISONS



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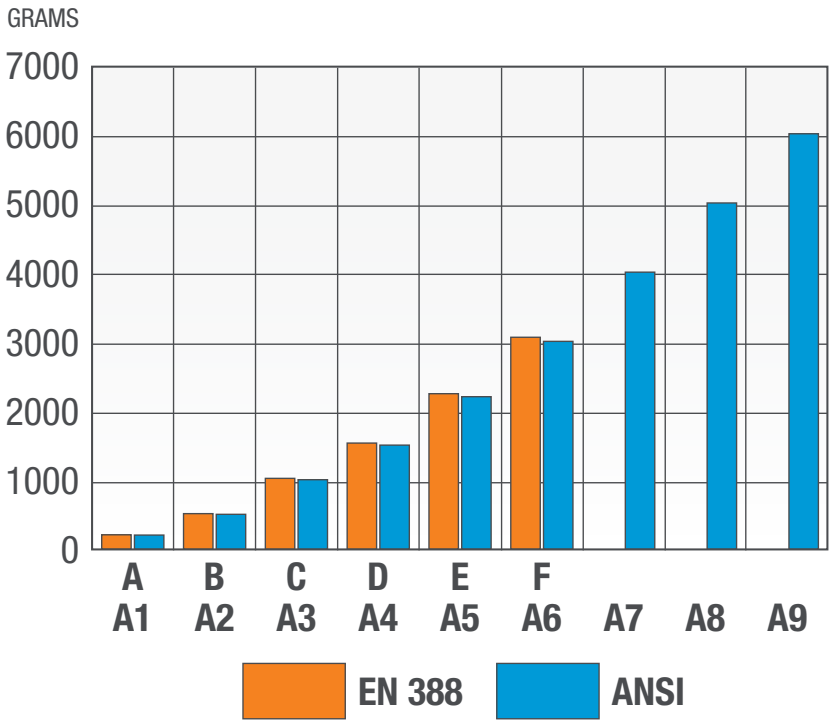
Standard Comparisons

NEW CUT ANSI / EN 388 STANDARDS

EN 388 vs ANSI



EN388		ANSI	
Level	Grams	Grams	Level
A	203.94	200	A1
B	509.86	500	A2
C	1019.72	1000	A3
D	1529.57	1500	A4
E	2243.38	2200	A5
F	3059.15	3000	A6
		4000	A7
		5000	A8
		6000	A9

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Variances between EN388: 2016 & ANSI new TDM-100 tests can occur because of the difference between using newtons vs grams.

Example:

99-9-9731

2 TDM-100 Tests:

- EN 388 Cut Level C*
- ANSI Cut Level A4

* Did not reach Level D because the test resulted somewhere between 1500 – 1529.56 grams. Resulting in a Low ANSI A4 level, and a high EN388:2016 Level C.

WHAT CUT STANDARD TO USE?

NEW CUT ANSI / EN 388 STANDARDS

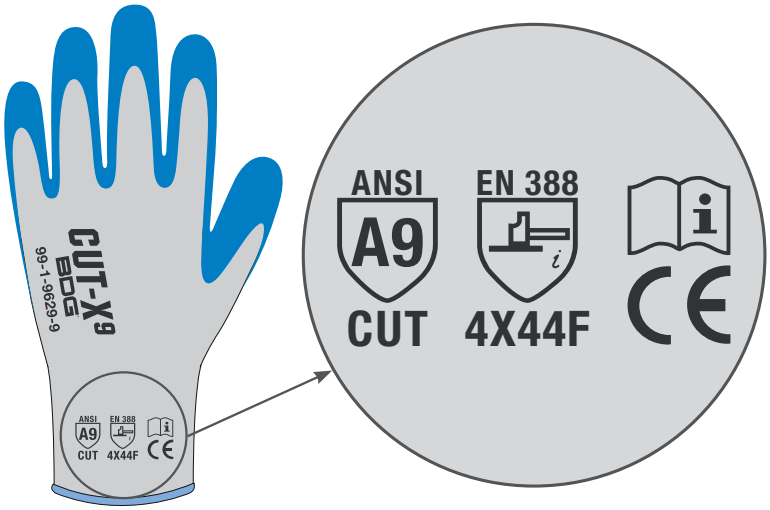
REFER TO THE NEW ANSI CUT STANDARD:

- ✓ ANSI is a North American made standard, while CE EN388 is a European made set of standards
- ✓ Our market is starting to recognize ANSI over EN388 because EN388 can be more confusing
- ✓ Customers can recognize numbers over letters Ex: ANSI A6 vs EN388 F

COMMITMENT TO SAFETY

BDG® hand protection products that have been tested will be marked to easily identify safety standards.

Data acquired from these tests ensures proper selection of the right glove with the right protection for any task at hand.



BDG CUT-X

WHAT THE STANDARDS MEAN FOR YOU?

Hand safety not only relies on selecting the right glove - but selecting the right glove for the task at hand. From lightweight product handling to heavy duty hazardous work, **BDG® CUT-X** gloves offer the diversity and protection for any work environment.

ANSI/EN 388 STANDARDS

NEW CUT ANSI / EN 388 STANDARDS

APPLICATIONS*

APPLICATIONS*	ANSI	EN 388
	ASTM F2992: TDM CUT TEST **Results are represented by levels A1 to A9** (Lowest to highest level of cut resistance) ** Previously represented as levels 1 to 5, ISEA 105-2011*	**ISO 13997:** TDM CUT TEST **Results are represented by levels A to F** (Lowest to highest level of cut resistance) ** Previously represented as levels 1 to 5, Coup Test*
GENERAL PURPOSE LIGHT MATERIAL HANDLING SHIPPING/RECEIVING	GRAMS ≥ **200** (201-499) **LIGHT** **A1**	**A** **2** NEWTONS (2-4.9) **LIGHT**
GENERAL PURPOSE MATERIAL HANDLING ASSEMBLY, AUTO	GRAMS ≥ **500** (500-999) **LIGHT - MEDIUM** **A2**	**B** **5** NEWTONS (5-9.9) **LIGHT - MEDIUM**
CONSTRUCTION METAL/GLASS HANDLING MANUFACTURING, AUTO	GRAMS ≥ **1000** (1000-1499) **MEDIUM** **A3**	**C** **10** NEWTONS (10-14.9) **MEDIUM**
METAL/GLASS HANDLING MACHINING, HVAC MANUFACTURING, FABRICATION	GRAMS ≥ **1500** (1500-2199) **MEDIUM - HEAVY** **A4**	**D** **15** NEWTONS (15-21.9) **MEDIUM - HEAVY**
METAL/GLASS HANDLING AUTOMOTIVE ASSEMBLY METAL FABRICATION	GRAMS ≥ **2200** (2200-2999) **HEAVY** **A5**	**E** **22** NEWTONS (22-29.9) **HEAVY**
METAL/GLASS HANDLING FOOD PROCESSING HEAVY DUTY CONSTRUCTION	GRAMS ≥ **3000** (3000-3999) **EXTRA HEAVY** **A6**	**F** **30** NEWTONS (30+) **EXTRA HEAVY**
	GRAMS ≥ **4000** (4000-4999) **EXTRA HEAVY** **A7**	1 Newton = 102 Grams (approx.)
	GRAMS ≥ **5000** (5000-5999) **EXTREME** **A8**	**TDM CUT TEST METHOD:** Weight (Newtons/Grams) needed to cut through material with 20 mm blade travel. EN 388 **4 X 4 4 D P** **Abrasion** Resistance **0-4** Rating Cut (Coup Test) **0-5** Rating **Tear** Resistance **0-4** Rating **Puncture** Resistance **0-4** Rating **Cut (TDM Cut Test)** **A-F** Rating **Impact** Protection **P** (P, F, or X)
	GRAMS ≥ **6000** (6000+) **EXTREME** **A9**	

* Applications are suggestions only. Proper safety/hazard assessments should be done prior to the use of any hand protection.

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BDG®
BOB DALE GLOVES
BOBDALEGLOVES.COM

Bob Dale Gloves **Canada**
4504 - 82 Ave. Edmonton, AB T6B 2S4
Ph/Tel: (780) 469-2100 | 1-800-661-7303

Bob Dale Gloves **USA**
1171 N. Fiesta Blvd. Gilbert, AZ 85233
Toll Free: 1-855-215-7113

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