



Personal Safety

Factors In Glove Selection: Cut Protection

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A Cut Protection Program is an important part of managing safety in your operation. Cut and abrasion risks are some of the most common workplace hazards that often lead to personal injuries. Safety managers need to be aware of current and pending regulations surrounding hand protection to insure workers are equipped with the proper PPE equipment. This guide serves as an overview of factors in the selection of the right glove in various risk environments.

Choose appropriate cut and abrasion resistance levels for hand and arm protection

ANSI (American National Standards Institute) Cut and Abrasion Resistance tables help identify the level of resistance offered, enabling compliance with OSHA regulations 1910.38 (a) and 1910.38 (b) intended to mitigate risk of injury and increase worker productivity. The ANSI/ ISEA (International Safety Equipment Association) 105-2005 standard provides a consistent, numeric-scale method to rate products in designated areas.

Abrasion Resistance:

Performance Level	Abrasion (revolutions)
(tested at 500g vertical force)	
0	<100
1	≥100
2	≥500
3	≥1000
(tested at 1,000g vertical force)	
4	≥3,000
5	≥10,000
6	≥20,000

Note: When tested in accordance with ASTM D3389-05

New cut resistance standards from American National Standards Institute (ANSI) and International Safety Equipment Association (ISEA) became effective in March 2016.

These new standards include changes to the ratings scale and the standardization on a testing methodology.

Glove manufacturers have developed a range of educational tools to make the standards simpler to understand and easier to adopt. In addition, their gloves that offer cut protection should be marked per the new performance standards to ensure full adherence.

Change in ANSI/ISEA classification levels for cut resistance

CURRENT: ISEA 105-2011		NEW: ANSI/ISEA 2016		EUROPE: EN388-2016	
ASTM F1790-2014 (CPPT)*		ASTM F2992-15 (TDM)		ISO 13997 (TDM)	
CPPT or TDM		TDM ONLY		TDM ONLY	
LEVEL	GRAMS	LEVEL	GRAMS	LEVEL	NEWTONS*
1	≥ 200	A1	≥ 200	A	2
2	≥ 500	A2	≥ 500	B	5
3	≥ 1000	A3	≥ 1000	C	10
4	≥ 1500	A4	≥ 1500	D	15
		A5	≥ 2200	E	22
		A6	≥ 3000	F	30
5	≥ 3500	A7	≥ 4000		
		A8	≥ 5000		
		A9	≥ 6000		

*Note: 1 Newton is equal to 102 grams of force. This means the new ANSI cut level in North America will correlate to the EN388 cut level in Canada and Europe.

New Icons



CUT

Going forward, cut protection gloves and sleeves and marketing collateral



will communicate 2016 ANSI cut levels in new graphic icons,
as shown on the glove example below.



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