



Cut Guide



Call MSC today to learn about
MCR Cut Pro® options.
800.645.7270 | mscdirect.com

Available
Today At

MSC

Innovations Technology Center (ITC Lab)

MCR Safety Innovations Technology Center
685 Highway 72
Piperton, TN 38017



In July of 2016, the MCR Safety's Innovations Technology Center had the pleasure of becoming one of the first North American testing labs to receive the ISO/IEC 17025 accreditation under the ANSI/ISEA 105 scope.

ISO/IEC 17025:2005 is the single most important standard for testing laboratories around the world.

Laboratories accredited to this international standard have demonstrated they are technically competent and able to produce precise and accurate test and/or calibration data.

MCR Safety's Innovations Technology Center (ITC) began operation in 2010. The three objectives at the forefront of the ITC lab development were:

1. Increase our ability to monitor the quality of incoming products produced at our factories.
2. Utilize the in-house testing laboratory, to increase Research & Development of new products and technologies.
3. Ensure that in-market comparisons between MCR Safety products and competitor products are viable. In other words, we want to ensure we are comparing apples-to-apples, and not apples-to-oranges.

*All testing performed for MCR Safety distributors is done free of charge.

The full scope of the accreditation includes the following tests:



Cut Resistance
Testing



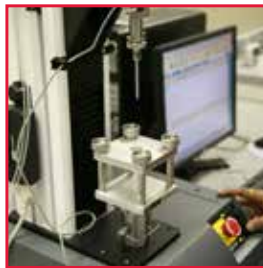
Test Method
ASTM F2992-15

Abrasion Resistance
Testing



Test Method
ASTM D3389-15 *Coated
Gloves*
ASTM D3884-09
Uncoated Gloves

Puncture Resistance
Testing



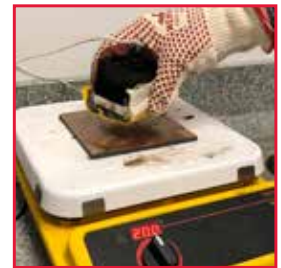
Test Method
EN 388-16

Tear Resistance
Testing



Tear Testing
EN 388-16

Conductive (Contact)
Heat Resistance Test



Test Method
ASTM F1060-08

"Integrity is doing what you say you will do" - Chuck Swindoll

Any glove company can market a cut resistant glove, however, has it passed the quality management testing process of an ISO 17025 laboratory which validates the performance levels? You can have 100% confidence that MCR Safety product will perform to the advertised cut resistant levels. These tests are not audited by OSHA or any government agency so it's up to the purchaser to determine the accuracy of testing. MCR Safety takes the guess work out by having our accredited lab perform testing so you can have 100% confidence that any MCR Safety product will perform to the advertised levels.

WE PROTECT PEOPLE!

Equipment: Tomodynamometer TDM-100

Blade Validation: Before and after each sample specimen is tested, the blades must be checked, to ensure the effective sharpness of the cutting edge.

Sample Prep:

- Three glove samples are required to perform the test
- The glove samples must be conditioned to specific environmental conditions
- A 2"x 4" swatch cut from the palm of each glove at a 45-degree angle
- The test sample is then mounted to the mandrel of the machine

Testing:

- Each of the three glove samples will receive a total of 15 cut through measurements.
- The 15 cut through measurements are broken out into 3 distinct distances:
- 5 data points in the 5mm to 20mm cut through distance range
- 5 data points in the 20mm to 33mm cut through distance range
- 5 data points in the 33mm to 50mm cut through distance range
- The plotting of these data points on graph, enables us to find the cut through distance at 20mm of blade travel.

Data Recorded:

	Sample 1 1820			Sample 2 1810			Sample 3 1718		
	Load (gf)	Distance (mm)	Norm. Distance (mm)	Load (gf)	Distance (mm)	Norm. Distance (mm)	Load (gf)	Distance (mm)	Norm. Distance (mm)
Calibration Cut (Before)	500	15.65		500	15.31		500	17.80	
1	2000	9.06	11.63	2000	7.83	9.46	2000	18.05	19.25
2	2000	9.37	12.03	2000	13.90	16.79	2000	5.74	6.12
3	2000	12.46	15.99	2000	6.75	8.15	2000	8.89	9.48
4	2000	5.02	6.44	2000	8.67	10.47	2000	15.26	16.28
5	2000	5.08	6.52	2000	8.96	10.82	2000	8.02	8.55
6	1800	24.44	31.37	1800	31.69	38.28	1600	20.86	22.25
7	1800	26.62	34.17	1800	20.28	24.50	1600	21.18	22.59
8	1800	20.80	26.70	1800	20.41	24.66	1600	24.94	26.60
9	1800	31.20	40.05	1800	20.14	24.33	1600	27.59	29.43
10	1800	20.39	26.17	1800	26.79	32.36	1600	28.30	30.19
11	1400	44.80	57.51	1400	33.17	40.07	1400	40.77	43.49
12	1400	33.44	42.93	1400	33.46	40.42	1400	33.20	35.41
13	1400	40.60	52.12	1400	33.11	40.00	1400	38.15	40.69
14	1400	33.03	42.40	1400	35.05	42.34	1400	39.11	41.72
15	1400	40.11	51.43	1400	41.10	49.65	1400	33.47	35.70
Calibration Cut (After)	500	15.31		500	17.80		500	19.70	
RESULTS	Sharpness Correction	1		Sharpness Correction	1		Sharpness Correction	1	
	Reference Distance	20mm		Reference Distance	20mm		Reference Distance	20mm	
	Rating Force (gf)	1820.16		Rating Force (gf)	1803.35		Rating Force (gf)	1718.50	
	% Confidence Interval (gf)	366.50		% Confidence Interval (gf)	341.43		% Confidence Interval (gf)	231.84	
	Standard Deviation (gf)	163.65		Standard Deviation (gf)	158.04		Standard Deviation (gf)	135.09	
	R-Squared	0.73		R-Squared	0.76		R-Squared	0.81	
Optional Sample Properties	Correction Factor	0.13		Correction Factor	0.12		Correction Factor	0.09	
	Basis WT	3.11	Grams	Basis WT	3.59	Grams	Basis WT	3.11	Grams
	Thickness	0.37	MM	Thickness	0.36	MM	Thickness	0.39	MM

Reporting and Averaging
the 3 gram scores

Average Rating Force (gf)	Cut Resistance Performance Level
1783	A4
3 Samples Tested	
ASTM F2992-15	ANSI/ISEA 105-2016
TDM-100	Section 5.11

ANSI/ISEA 105 2016
Cut Score Gram Levels

A9: 6,000+ grams to cut
A8: 5,000 to 5,999 grams to cut
A7: 4,000 to 4,999 grams to cut
A6: 3,000 to 3,999 grams to cut
A5: 2,200 to 2,999 grams to cut
A4: 1,500 to 2,199 grams to cut
A3: 1,000 to 1,499 grams to cut
A2: 500 to 999 grams to cut
A1: 200 to 499 grams to cut

Tomodynamometer TDM-100



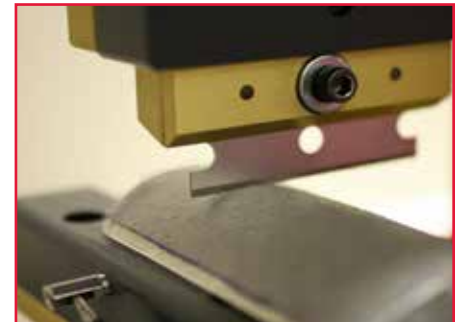
Blade Validation



Sample Prep



Testing



Data Recorded



"It's only after you've stepped outside your comfort zone that you begin to change, grow, and transform." - Roy T. Bennett



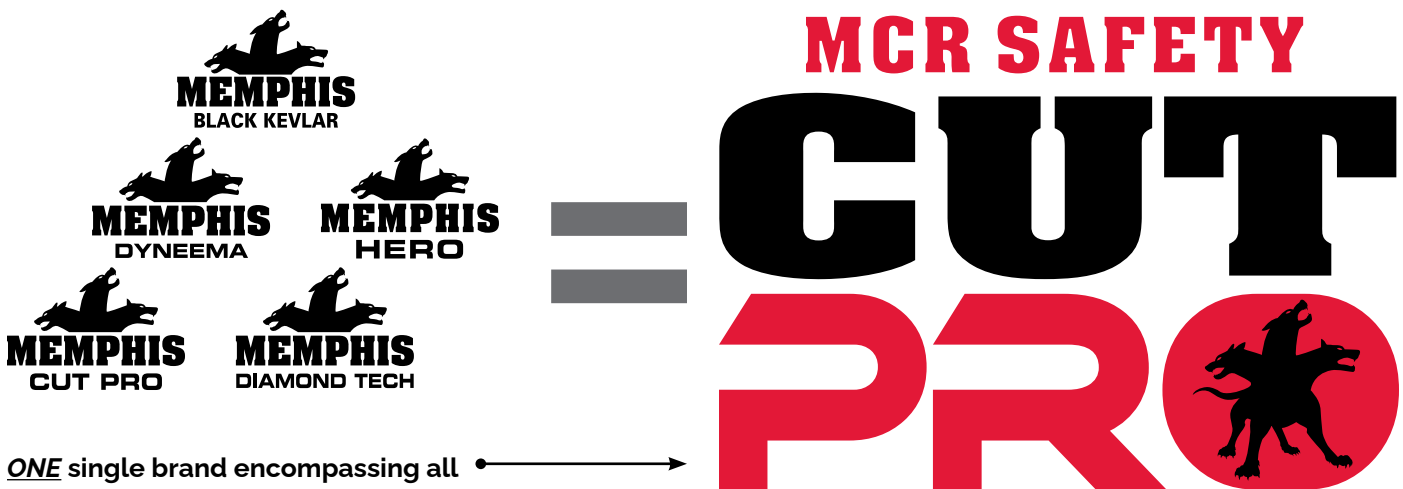
Every day consists of change and improvement so at MCR Safety we are living this out by updating the most powerful cut protection offerings in the industry with a single brand that represents the best of the best in fibers, coatings, and technology advancements as CUTPRO. One unified brand identity along with an easy identifiable cut scoring system.

Glove Shell and Coating

Guess what?! The name is changing and that's it. The glove shell fiber combination and coating is staying exactly the same as before - No changes....Zero, Zilch, Zip, Nada

Inventory

During this transition, there is a good chance that you could receive old and new logo product however that's the only difference. The glove is the same product that we have manufactured for years which means we still have your back. Same protection, same glove, same piece of mind in wearing Protection You Can Trust!



ONE single brand encompassing all cut resistant gloves

ITEM#

Easy identification of Cut Protection Levels



Understanding ANSI/ISEA 105 2016 Cut Score Gram Levels



Extreme Cut Hazards	A9: 6,000+ grams to cut
Very High Cut Hazards	A8: 5,000 to 5,999 grams to cut
High Cut Hazards	A7: 4,000 to 4,999 grams to cut
Heavy Cut Hazards	A6: 3,000 to 3,999 grams to cut
Medium to Heavy Cut Hazards	A5: 2,200 to 2,999 grams to cut
Medium Cut Hazards	A4: 1,500 to 2,199 grams to cut
Light to Medium Cut Hazards	A3: 1,000 to 1,499 grams to cut
Light Cut Hazards	A2: 500 to 999 grams to cut
Not Recommended for Cut	A1: 200 to 499 grams to cut

