



Regulatory Compliance

## **ANSI/ISEA 105 PPE Marking Update**

Brought To You by MCR Safety | Sep 04, 2024

### **8.2 Specific Marking**

Hand and arm protection shall be marked per the pictogram here. Markings shall be affixed so as to be visible and legible throughout the normal useful life of the glove. The following convention shall be applied, where applicable classifications are claimed by the manufacturer:

- a. Cut-resistance, Section 6.1.1 (inside center)
- b. Abrasion resistance, Section 6.1.4 (inside left)
- c. Puncture resistance, non-hypodermic needle, Section 6.1.2 (inside right).

#### **6.1.1 Cut Resistance**

When tested in accordance with ASTM F2992-15, the glove's or sleeve's cut resistance shall be classified against the levels listed in Table 1, using the weight needed to cut through the material with 20 mm of blade travel. Data collection procedures in Appendix A shall be followed. Calculation for cut resistance classification may be done using the ISEA standardized template available at [www.safetysafetyequipment.org](http://www.safetysafetyequipment.org). The average of a minimum of 3 samples shall be used to report the classification level.

# ANSI/ISEA 105



## TEAR 3 HEAT 3

Cut Resistance Testing		NCS SAFETY	
Grams To Cut		CUT A5	2,200 to 2,999 Medium to Heavy Cut Hazards
CUT A1	200-499 <small>Not Recommended for Cut</small>	CUT A6	3,000 to 3,999 Heavy Cut Hazards
CUT A2	500-999 Light Cut Hazards	CUT A7	4,000 to 4,999 High Cut Hazards
CUT A3	1,000-1,499 Light to Medium Cut Hazards	CUT A8	5,000 to 5,999 Very High Cut Hazards
CUT A4	1,500-2,199 Medium Cut Hazards	CUT A9	6,000+ Extreme Cut Hazards

Abrasion Resistance Testing		NCS SAFETY	
500 Gram Load		1000 Gram Load	
Revolutions To Failure		Revolutions To Failure	
ABR 1	100-499	ABR 4	3000-9999
ABR 2	500-999	ABR 5	10000-19999
ABR 3	1000-2999	ABR 6	20000+

Puncture Resistance Testing		NCS SAFETY	
Measured by Newtons			
Newton's to Puncture		PUN 3	60-99
PUN 1	10-19	PUN 4	100-149
PUN 2	20-59	PUN 5	150+

Tear Resistance Testing		NCS SAFETY	
Measured by Newtons			
TEAR 1	10-24	TEAR 3	50-74
TEAR 2	25-49	TEAR 4	75+

Impact Resistance Testing		NCS SAFETY	
kilo Newton Impact Protection Rating			
Performance Level	Mean (kN)	All Impacts (kN)	
IMP 1	<9	<11.3	
IMP 2	<6.5	<8.1	
IMP 3	<4	<5	

Conductive Heat Resistance Testing		NCS SAFETY	
Measured to the Heat Levels listed below:			
Protects up to Fahrenheit *		HEAT 3	392°
HEAT 1	176°	HEAT 4	500°
HEAT 2	284°	HEAT 5	608°

## 6.1.4 Abrasion Resistance

When tested in accordance with ASTM D3389-16, or ASTM D3884-09 (2017), the glove or sleeve's abrasion resistance shall be classified against the levels listed in Table 4 using the number of abrasion cycles to failure (test endpoint).

These test methods shall be followed using H-18 abrasion wheels with a 500 gram load for levels 0 to 3. If the samples exceed 1000 revolutions at the 500 gram load, new (untested) samples shall be used to determine levels 4 to 6 using 1000 gram load.

NOTE: It is not the intention to apply the 1000 gram load to the same sample to continue the test.

Using ASTM D3389-16 for coated glove materials or unsupported gloves, the end point at which the glove or sleeve material is determined to fail shall be at the number of abrasion cycles until the film or coating is worn through the glove or sleeve's coating and liner. Using ASTM D3884-09 (2017) for uncoated glove or sleeve materials, the end point at which the glove or sleeve material is determined to fail shall be at the number of abrasion cycles needed to wear through the specimen.

The average of a minimum of 5 specimens shall be used to report the classification level.

## 6.1.2 Puncture Resistance (other than Hypodermic Needle)

When tested in accordance with clause 6.4 of EN 388:2016, the glove or sleeve's resistance against puncture shall be classified against the levels listed in Table 2, using the puncture force.

The average of a minimum of 12 specimens shall be used to report the classification level.

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