HAND PROTECTION
ANSI GLOVE STANDARDS

ANSI/ISEA 105 is a voluntary US standard that specifies test methods and provides performance ranges for many different properties including chemical resistance, cut resistance, puncture resistance and abrasion resistance.

ANSI/ISEA CLASSIFICATIONS
CUT RESISTANCE

LEVEL			WEIGHT (GRAMS)	APPLICATIONS	EXAMPLES
CUT HAZARD	Light	ANSI A1 CUT	≥ 200	Maintenance, Material Handling, Small Parts Assembly, Warehouse	 **TUF-COR™ TOUCH** #6992
	Light - Medium	ANSI A2 CUT	≥ 500	Assembly, Appliance Manufacturing, Auto Repair, Construction/Remodeling, Maintenance, Material Handling, Metal Fabrication	 **BLACK LABEL™ Red** #3705
		ANSI A3 CUT	≥ 1000	Assembly, Appliance Manufacturing, Auto Repair, Construction/Remodeling, Maintenance, Material Handling, Metal Fabrication	 **CALIBER™ TOUCH** #3716T
	Med - High	ANSI A4 CUT	≥ 1500	Aerospace, Appliance Manufacturing, Automotive, Construction/Remodeling, Glass Handling, HVAC, Machining, Metal Fabrication, Stamping, Paper/Pulp Production	 **MACHINIST™** #3734
		ANSI A5 CUT	≥ 2200	Aerospace, Appliance Manufacturing, Automotive, Bottling/Canning, Construction/Remodeling, Flooring Installation, Glass Handling, HVAC, Machining, Metal Fabrication, Stamping, Paper/Pulp Production	 **SABRE™** #3350
	High	ANSI A6 CUT	≥ 3000	All of the Above Plus Meat Processing, Recycling, Window Manufacturing	 **POWER-COR™ ULTRA** #3051
	High-Heavy	ANSI A7 CUT	≥ 4000	Automotive Demolition, High-Grip Applications, Sheet Metal Handling, Welding	 **COMMANDER™ FOAM** #3732F
	Heavy	ANSI A8 CUT	≥ 5000	Automotive Demolition, Heavy Equipment Maintenance, High-Grip Applications, Oil & Gas, Pulp & Saw Mills, Sheet Metal Handling, Welding	
	Extreme	ANSI A9 CUT	≥ 6000	Automotive Demolition, Heavy Equipment Maintenance, High-Grip Applications, Oil & Gas, Pulp & Saw Mills, Sheet Metal Handling, Welding	

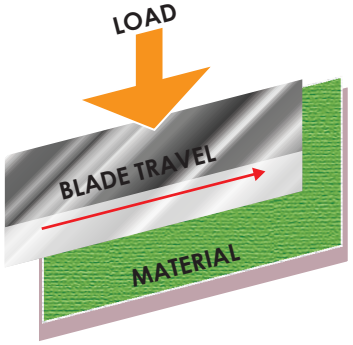

Fig 1. Testing for Cut Resistance with a Blade Under Load

Cut Resistance (ANSI/ISEA 105): To determine cut resistance, a test sample is cut by a straight-edge blade, under load, that moves along a straight path. The sample is cut five times, each under three different loads, and the data is used to determine the required load to cut through the test sample at a distance of 2mm (0.8 inches). Test scores are expressed in Levels and in the number of grams (load). The higher the number of grams, the more cut resistant the material.

ANSI/ISEA CLASSIFICATIONS

ABRASION RESISTANCE

LEVEL		ABRASION RESISTANCE (CYCLES)	APPLICATIONS	EXAMPLES
Light	ANSI 1 ABR	109-499	Paper/Cardboard Cuts, Light Material Handling, Parts Assembly	 **CONTACT™ Foam Latex** #3991
Light-Medium	ANSI 2 ABR	500-999	Paper/Cardboard Cuts, Light Material Handling, Parts Assembly	 **COR-GRIP PRO™ Crinkle Latex** #3986P
Medium	ANSI 3 ABR	1,000-2,999	Light Construction, Material Handling, Parts Assembly, Packaging	 **MACHINIST™ Nitrile Foam** #3734
Medium-Heavy	ANSI 4 ABR	3,000-9,999	Construction, Light Metal Stamping, Light Glass Handling, Manufacturing	 **COMMANDER™ Foam** #3732F
Heavy	ANSI 5 ABR	10,000-19,999	Construction, Metal Stamping, Food Service, Glass Handling	 **THRESHOLD™** #3731
Extreme	ANSI 6 ABR	20,000+	Oil & Gas, Mining, Heavy Duty Construction, Demolition, Manufacturing, Metal Fabrication	 **COMMANDER™ HV** #3732HV

Abrasion Resistance (ANSI/ISEA 105): Abrasion Resistance is measured as number of rotations on a friction machine before abrasion occurs.

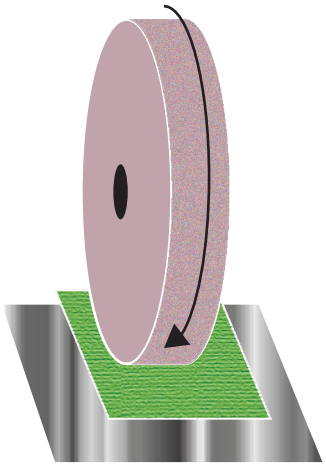

Fig 2. Testing for Abrasion on a Friction Machine

ANSI/ISEA CLASSIFICATIONS

PUNCTURE RESISTANCE

LEVEL		PUNCTURE RESISTANCE (NEWTONS)	APPLICATIONS	EXAMPLES
Light	ANSI 1 PUNC	10-19	Paper/Cardboard Cuts, Light Material Handling, Parts Assembly	
Light-Medium	ANSI 2 PUNC	20-59	Light Construction, Material Handling, Parts Assembly, Packaging	 **TACTYLE™** #6670
Medium	ANSI 3 PUNC	60-99	Construction, Light Metal Stamping, Light Glass Handling, Manufacturing	 **COMMANDER™** #3732
Medium-Heavy	ANSI 4 PUNC	100-149	Construction, Metal Stamping, Glass Handling, Recycling, Injection Molding	 **MACHINIST™ Sandy Nitrile** #3734TPR
Heavy	ANSI 5 PUNC	150+	Oil & Gas, Mining, Heavy Duty Construction, Demolition, Manufacturing, Metal Fabrication	 **iON™** #3702

Puncture Resistance (ANSI/ISEA 105): Puncture resistance is determined by the max force that it takes, exerted from a probe, to puncture the fabric.

ANSI/ISEA CLASSIFICATIONS

IMPACT PROTECTION

This standard specifically focuses on the back of the hand by measuring the dissipating impact from the knuckles and fingers.

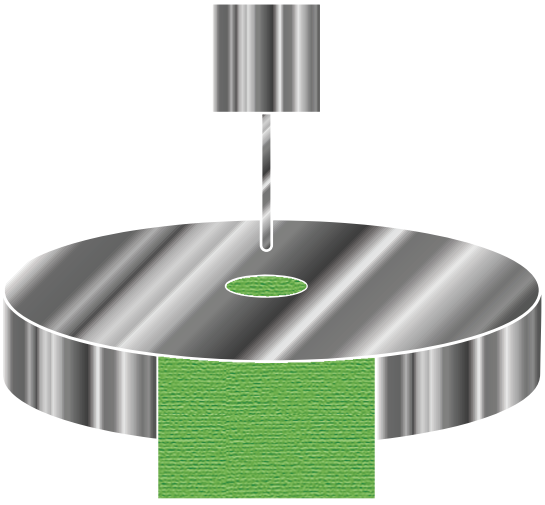

Fig 3. Testing for Puncture Resistance with a Probe

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