

ANSI/ISEA EXPLAINED

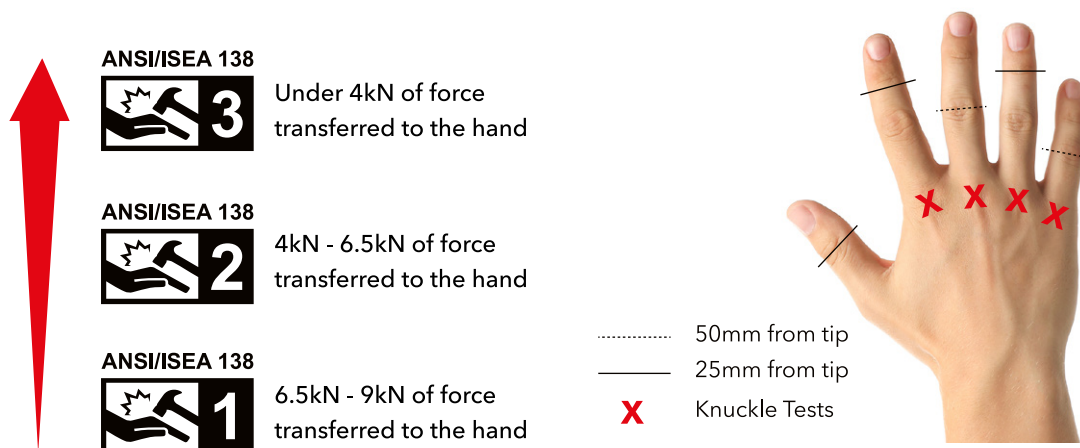


GLOVE PROTECTION - North America

ANSI/ISEA138:2019 - IMPACT RESISTANCE

This American National Standards Institute's standard sets requirements of gloves designed to protect the knuckles and fingers from impact forces. There are 3 levels of impact resistance under ANSI/ISEA138:2019, the higher the number, the higher the protection. The higher the score number indicates that less force was transmitted to the wearer's hand. Level 1 translates to $\leq 9\text{kN}$ of force transmitted to the wearer's hand; Level 2 is $\leq 6.5\text{ kN}$, and Level 3 is $\leq 4\text{kN}$.

The test is performed by dropping a falling weight on the impact areas of the glove recording the force transferred in kilonewtons (kN). Areas tested are knuckles at back of hand, fingers and the thumb. The weakest performance area defines the overall performance level of the glove and the protection level is given at the glove marking.



EN388 and ANSI/ISEA138 Comparison

EN388
(4 tests)
Pass or Fail



ANSI/ISEA138
(18 tests)
3 Levels



ANSI/ISEA EXPLAINED



GLOVE PROTECTION - North America

ANSI/ISEA 2016 - CUT RESISTANCE

The American National Standards Institute's ANSI/ISEA 2016 cut resistance standard uses a nine (9) level scale. It quickly helps users identify the cut-resistant glove and sleeves required for the specific hazard faced.

NOTE: ANSI/ISEA 2016 now replaces the previous well known 5 cut levels of ISEA 105:2011.

The level of cut resistance extends from 0 to 6000 grams, based on tests by a Tomodynamometer (TDM Method), which moves a blade back and forth across the material. The higher the weight required to cut through the materials, the higher the cut resistance rating. A higher rating provides the wearer with better protection and cut performance.

(The TDM test is called the ASTM F2992/F2992M-15 and is based on 20mm of blade travel)

NEW: ANSI/ISEA 2016			OLD: ISEA 105:2011	
A1	≥200g	VERY LIGHT CUT HAZARD Applications in warehousing, forestry, gardening, construction, material handling	Cut 1	≥200g
A2	≥500g	LIGHT CUT HAZARD Applications in assembly, packing, metal handling, construction	Cut 2	≥500g
A3	≥1000g	LIGHT-MEDIUM CUT HAZARD Applications in assembly, packing, metal handling, construction	Cut 3	≥1000g
A4	≥1500g	MEDIUM CUT HAZARD Applications in light glass handling, electrical, drywall, HVAC, machining, construction	Cut 4	≥1500g
A5	≥2200g	MEDIUM-HEAVY CUT HAZARD Applications in glass handling, drywall, HVAC, appliance manufacturing, electrical		
A6	≥3000g	HEAVY CUT HAZARD Applications in light metal stamping, fabrication, sharp glass & metal handling	Cut 5	≥3500g
A7	≥4000g	HIGH CUT HAZARD Applications in metal/wire/glass manufacturing, aerospace, recycling, HVAC		
A8	≥5000g	VERY HIGH CUT HAZARD Applications in metal/wire/glass manufacturing, aerospace, HVAC, blade handling		
A9	≥6000g	EXTREME CUT HAZARD Applications in metal/wire/glass manufacturing, aerospace, HVAC, blade handling		