



# **A GUIDE TO CUT PROTECTION**

including Cut Level 5 Gloves

**Ansell**

# CUT PROTECTION TIPS

## Hand protection standards

It's not easy for Workplace Health and Safety (WHS) Managers to stay abreast of the rating systems used to classify hand safety PPE. But it helps if you know which organisations are responsible for setting the standards and how each standard is applied.

ORGANISATION	STANDARD	RATING CODE
The International Organisation for Standardisation	International Standard	ISO
Standards Australia	The Australian/New Zealand Standards	AS/NZS
European Committee for Standardisation	European Standard	EN

Many countries throughout the Asia-Pacific region have adopted the European (EN) standards. While the majority of the Australian/New Zealand (AS/NZS) occupational glove standards are identical to the European standards, there are instances where the European standard has been revised but the Australian/New Zealand standard has not.

For example, the protection against cold standard AS/NZS 2161.5:1998 is not the same as the European cold standard EN 511:2006. The requirements are similar but the two standards use different testing methodologies. Due to these anomalies, it is important to understand what is meant by the various codes and markings within the glove safety standards.

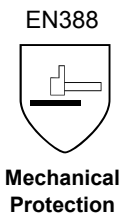
## How to interpret hand safety standards

Operational testing and evaluation of PPE is a critical part of any thorough risk assessment process. However, if you're responsible for sourcing industrial gloves, you also need to recognise the codes and symbols used for specifying protection levels across the standards. Not only do they describe degrees of quality and protection, they also indicate specific product attributes, like materials used during manufacture.

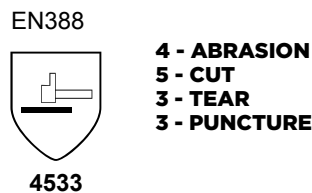
Each requirement, such as Abrasion Resistance, is represented by a symbol and a number stamped on the glove. Rated 1-4 with the exception of cut which is 1-5 the higher the number, the higher the level of protection provided. The figures are derived from specific tests for attributes such as Cut Resistance.

## What is cut protection?

Cut Protection falls within the Mechanical Protection category EN388 or AS/NZS 2161.3 Protection Against Mechanical Risks, as depicted by the following symbol.



The EN 388 or AS/NZS 2161.3 standard is derived from four basic tests. Each test carries a rating from 1-4, except Cut Resistance which ranges from 1-5. The results of testing are summarised as a performance rating (see example below - '4 5 3 3'). The higher the rating, the more protection is provided.



## Why is cut protection so important?

Cut protection is critical for industries like automotive assembly, where wounds to the hand represent 14% of all workplace injuries. These can be avoided by the use of appropriate protective equipment. Other applications where cut protection is important include handling metal sheets, carpentry, machinery maintenance, glass manufacturing, and food processing.

Applications involving sharp objects should be assessed and the appropriate level of hand protection can be recommended by Ansell in conjunction with the employer and safety manager. We use our hands for everything we do. Without your hands your earning capacity is dramatically reduced.

# THE CUTTING EDGE

Work should never come at a risk to personal safety. I can't imagine anyone arguing with the point that everyone deserves to go to work and return home unharmed. But despite progressive emphasis on safety, workplace accidents still occur at an alarming rate with the last publication by Safe Work Australia revealing a staggering 134 835 workers' compensation claims for serious work-related injuries or illnesses per year.

## What are you risking over a hard day's work?

According to the Australian Bureau of Statistics, around 640,700 of us experienced at least one work-related injury during the 2009-10 financial year. And hand injuries - for the most part cuts and wounds - continue to make up a significant proportion, resulting in large numbers of hospital presentations each year - more than 8000 according to another study. In New Zealand, the picture isn't much better: a recent government report found wrist and hand injuries made up 17 percent (35,700) of workplace injury claims in 2010.

## So what is going wrong?

Hand injuries should be one of the most preventable. While there is no substitute for compliance, significant innovation across the sector has led to an extensive choice of high-tech protective equipment. Safety glove manufacturers now use varying combinations of stainless steel, fiberglass, polyethylene and other high performance materials in the manufacture of their gloves, offering unprecedented protection against cuts caused by exposure to sharp edges such as glass, metal and ceramics. However, many businesses that think they are buying Cut Level 5 gloves are actually buying inferior protection due to discrepancies in safety standards between brands.

## Should we all be upgrading?

Well, truth be told, many businesses think they already are. But businesses need to proceed with caution. It is well known amongst industry experts that not all Cut Level 5 gloves are made the same. In fact, performance variability between brands and suppliers remains a significant concern because of certain irregularities in standards testing and compliance.

## The EN388 loophole

When Australia adopted the EN388 standard for measuring and testing safety gloves, it did so with one very important omission: unlike the European standard, Australia does not mandate independent testing in approved EU accredited laboratories, essentially paving the way for more unscrupulous manufacturers to make unsubstantiated protection claims.

Additionally, the EN standard itself is inherently problematic when it comes to measuring cut resistance: sample gloves undergo what is commonly referred to as the 'coup' test, which entails moving a circular blade, under a specific load, backwards and forwards across the glove until it cuts to determine its performance level. Yet there is one major paradox: the EN388 standard itself is unsuitable for testing gloves containing highly cut resistant materials that can erode or blunt the test blade - the very same materials that manufacturers use to actually increase cut resistance. The EN standard suggests using the ISO 13997 test to calibrate cut resistance levels for gloves that include some of these harder materials, but it does not mandate it. So in reality, it is left to the discretion of individual manufacturers. And the absence of mandatory testing means that gloves are being imported with EN standard certifications that have not been validated in an approved EU accredited laboratory.

## Cut Level 5 is only superior if its certified

Businesses should be sourcing from manufacturers who abide by stringent international regulations. If you are purchasing Cut Level 5 gloves, you should be asking your supplier to provide certification details. If the gloves haven't been tested in an accredited laboratory, then the protection claims could be illegitimate or misleading, putting the safety of workers at risk.

It's also important to remember that the performance of gloves will vary considerably under different situations and applications. If gloves are susceptible to punctures, or if they don't fit properly, then they are unlikely to provide the desired hand protection irrespective of their Cut Level. The same applies to gloves that are regularly exposed to additional hazards like chemicals and abrasives. Frequent exposure to an abrasive hazard, for example, can diminish the glove's ability to protect workers from cuts and punctures.

Reputable manufacturers not only conduct stringent testing in EU accredited laboratories, they also carry out regular research among safety officers, operations managers, purchasing agents and workers to ensure their products are performing to expectations.

## Workplace safety is everyone's job

While the government certainly has a big role to play, businesses too have an obligation to substantiate protection claims made by manufacturers. The safety sector has made huge progress over the years and continued collaboration between regulators, manufacturers and industry is key to securing safer workplaces for future generations.

Insisting on certified (by an approved EU accredited laboratory) Cut Level 5 gloves would not only keep your workplace safe, but manufacturers honest.

# ANSELL GUIDE TO CUT PROTECTION



## HyFlex® 11-518

In Ansell field trials, the 11-518 glove was preferred by nearly 70% of workers wearing other light to medium duty synthetic gloves. Ideal for handling fine, sharp parts, the workers praised the bare hand-like comfort, dexterity and cool, dry fit. The polyurethane palm coating provides excellent abrasion resistance, equivalent to heavier duty gloves. Genuine cut protection has never felt this light.

### Protection standards



## HyFlex® 11-627

Ansell's HyFlex 11-627 glove provides the user with dexterity and superb cut resistance for optimal productivity. The liners of these HyFlex gloves have a yarn structure that offers high levels of cut resistance for safe use in controlling, handling and assembly applications involving contacts with sharp pieces.

### Protection standards



## HyFlex® 11-624

Ansell's HyFlex 11-624 glove offers users a 'cool feeling' making them easy to wear during long working hours. The special formulation of the polyurethane coating gives the gloves flexibility and fit, as well as a secure grip on dry to slightly oily pieces for sure handling in a wide range of environments. The liner is made with a yarn structure containing Dyneema® technology, which offers strong cut resistance for the safe handling and assembly of sharp pieces.

### Protection standards



## ActivArmr® Carpenter 97-006

ActivArmr® Carpenter 97-006 gloves are specifically designed for the task at hand. When working with wood, nails and power tools the second skin dexterity provides advanced protection and grip featuring Dyneema® yarn providing breathability.

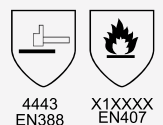
### Protection standards



## Vantage® 70-765

The Vantage® 70-765 glove provides advanced cut protection combined with premium leather for a superior grip. Reinforced thumb and seams relocated to the backs of the fingers reduce exposure to cuts and offers greater protection and longer life. This design helps guard against sharp snags and punctures, as well as offering superior grip even in oily environments thanks to use of premium leather in the palm.

### Protection standards



## HyFlex® 11-435

With unmatched dexterity and high cut protection, the HyFlex 11-435 glove is extremely resistant to cuts and snags. Featuring Dyneema® technology, the HyFlex 11-435 glove provides a seamless plaited glove for maximum comfort, dexterity and flexibility, while giving the user excellent breathability and a cool feeling.

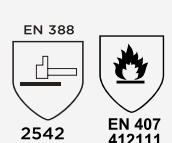
### Protection standards



## PowerFlex® 80-813

A PowerFlex 80-813 glove is one of the first gloves to combine high levels of flame resistance and cut protection in one comfortable, ergonomic design. The exclusive composite yarn, with its core glass fibre, delivers cut-resistance at level 5 (the highest rating) and flame resistance at level 4 (also the highest), whilst also dissipating electrostatic charges. All components are inherently flame resistant and maintain their properties throughout the glove's life.

### Protection standards



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