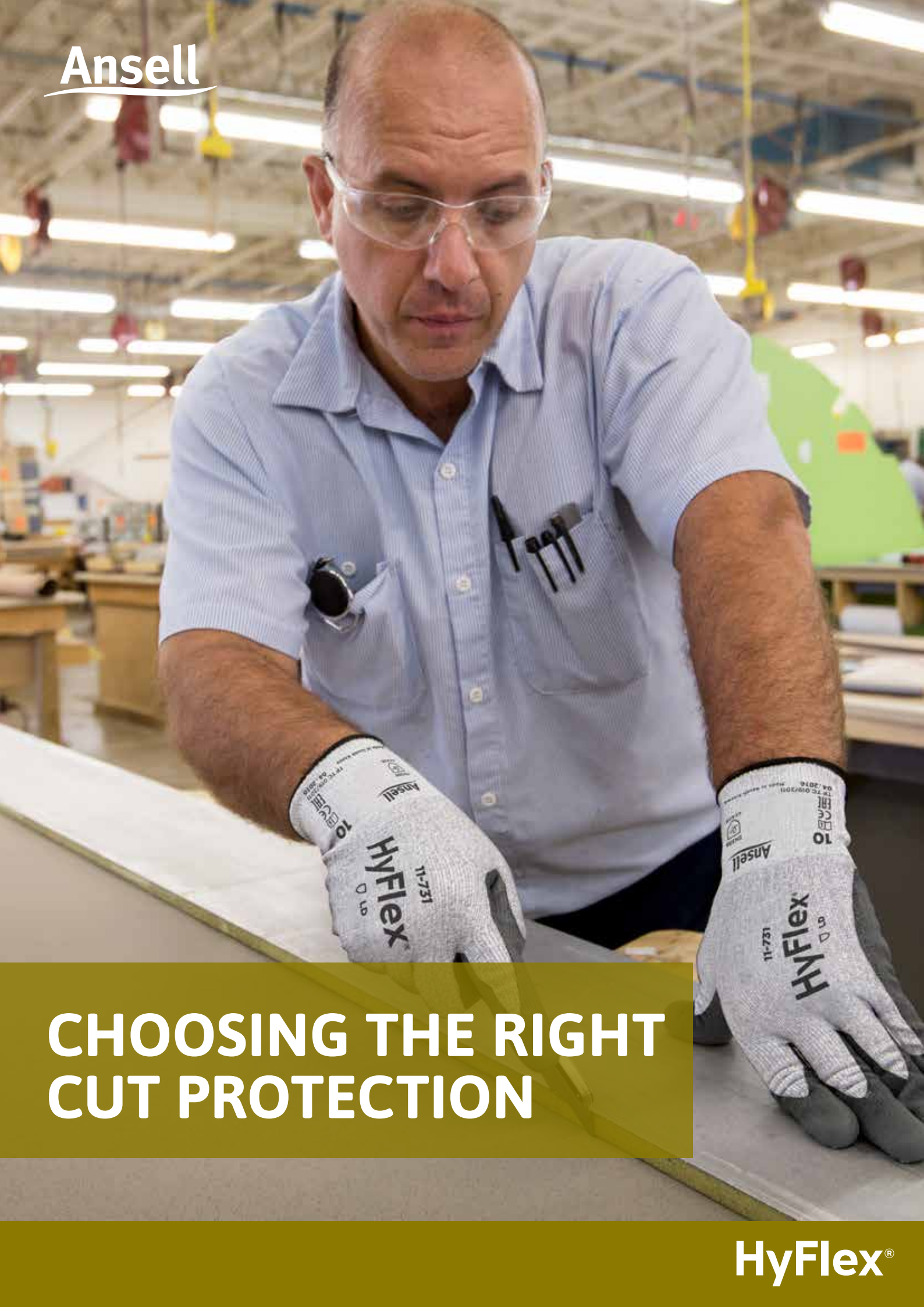


Ansell



CHOOSING THE RIGHT CUT PROTECTION

HyFlex®

REMOVING THE GUESSWORK FROM HAND PROTECTION AGAINST CUT INJURY

Confusion often leads to non-compliance and leaves workers susceptible to injury, so it's worthwhile taking the time to understand cut level rating differences and suitability by application.

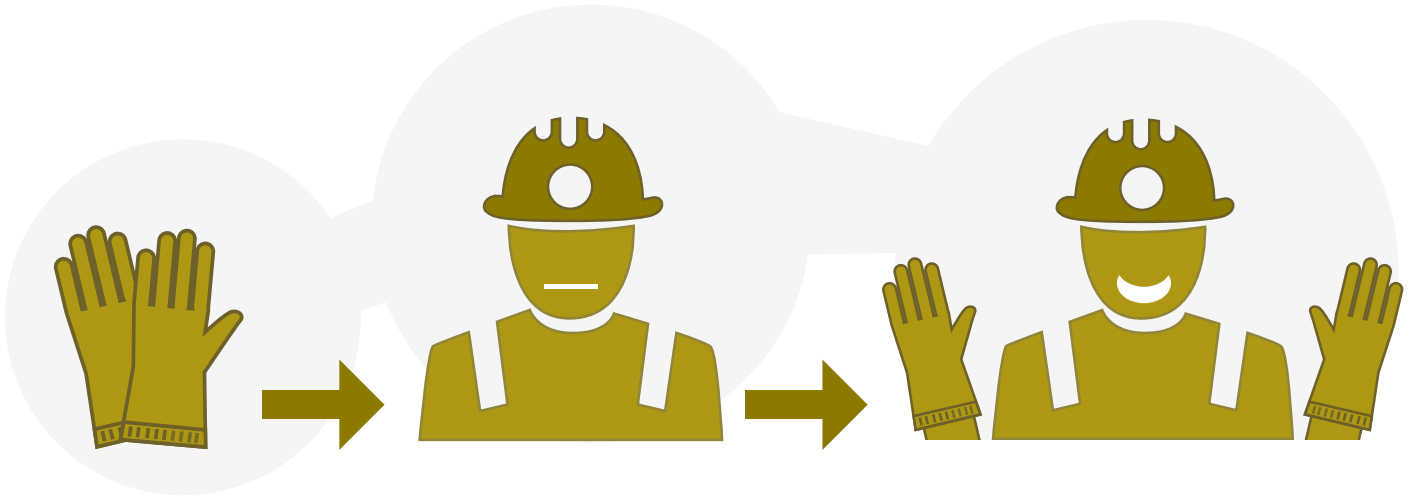
The 2016 revision of the EN 388 mechanical protection standard, which governs protective gloves and sleeves, introduced a range of modifications designed to enable safety managers and other professionals to confidently identify the most appropriate option for their specific requirements.

While the changes were designed to facilitate easier selection of a suitable glove solution, the added cut category and expanded performance level rating can make it difficult to ascertain at a glance which of the many available options represents the best choice for the specific present conditions.

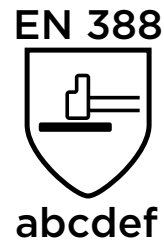
One of the most significant changes was the introduction of a revised product testing methodology, resulting in an expanded performance level rating for cut resistance, based on more rigorous, repeatable and standardised testing.



PERFORMANCE RATINGS EXPLAINED



The EN 388:2016 labelling requirements were revised and include a pictogram followed by up to six position-specific numbers or letters, which indicate test performance ratings. For alpha ratings, A is the lowest and F the highest resistance to cut. Numeric ratings run from 1 (the lowest) to four or five. The use of an X in positions 1-5 indicates testing has not been done or the test is not applicable. Labelling positioning is as follows:



a. Position 1	Abrasion Resistance (Rating 1 to 4)
b. Position 2	Blade Cut Resistance (Rating 1 to 5)
c. Position 3	Tear Resistance (Rating 1 to 4)
d. Position 4	Puncture Resistance (Rating 1 to 4)
e. Position 5	EN ISO Cut Resistance (Rating A to F)
f. Position 6	Impact Protection (P for pass, no marking for failure or in the absence of testing)

The performance level rating required is determined by the application and present risks. As with any personal protective equipment (PPE) selection, the process begins with an assessment of the environment in which the hand protection will be used.

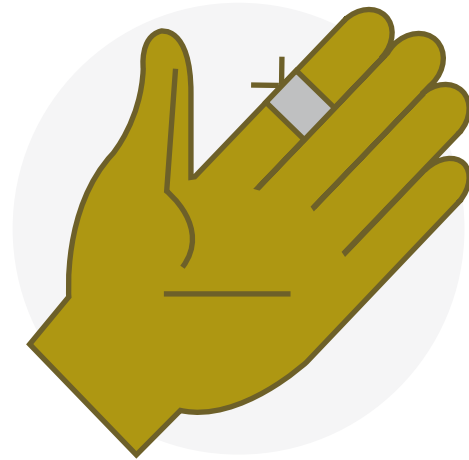
ENVIRONMENT AND APPLICATION

A range of additional factors also guide the choice of cut resistant hand protection, but none more than the application and environment.

Exposure to sharp materials and cut risk is commonplace in most industrial environments and the degree of present risk in specific workplace undertakings is the most useful indicator when determining which of the six available cut resistance ratings should be employed.

While some duties — such as metal press work — are inherently and overtly risky, even seemingly 'safe' tasks, such as screwing and unscrewing or carrying out general warehouse duties, can leave workers vulnerable to cut injury.

The best protective solutions are designed expressly for defined tasks, or a range of typical activities and likely conditions within a specific industry sector. To ensure you identify the best possible choice, you should look for solutions from a vendor that offers a comprehensive range of options across the full cut level rating gamut.



Cut level by application — as easy as A-B-C

EN ISO Cut level resistance is measured in Newtons and ranges from 2 (Level A) through to 30 (Level F). The more weight required to cut through the glove material, the higher the rating. The following information provides guidance on the appropriate level of protection for some common industrial tasks. *

Cut Level Rating	Resistance (Newtons)	Protection Level	Typical tasks
A	2	Minimal risks	<ul style="list-style-type: none"> • Screwing and unscrewing • Raw materials reception • Grinding and fettling • Shipping and receiving • Warehouse work • Stamping operations • Inspection and packing of small components • General handling
B	5	Moderate	<ul style="list-style-type: none"> • Wire assembly and fastening • Metal part and component assembly • Plastics injection and moulding • Light metal presses • Whitegoods assembly • Glass repair • Building materials handling
C	10	High	<ul style="list-style-type: none"> • Body shop work (excluding welding) • Glass or metal sheet handling • Stamping • Hardware assembly • Raw materials handling • Glass manufacturing
D	15	High	<ul style="list-style-type: none"> • Metal parts and components assembly • Automated welding and feeding • Metal finish inspection • Machine tool operation • Sheet metals and metalwork
E	22	Extreme	<ul style="list-style-type: none"> • Waste handling (recycling and sorting glass, cans or other metal pieces) • Handling heavy loads and metal edges • Handling glass sheets or shard-edged objects • Metal sheet handling • Cutting of dry, painted or galvanised metal pieces
F	30	Extreme	<ul style="list-style-type: none"> • Heavy final assembly • Machining and grinding • Maintenance work • Materials handling • Metal press work • Primary assembly • Stamping

Disclaimer: This guide has been prepared to allow viewers to understand the concepts of cut resistance. No glove provides complete protection against cuts, abrasions or chemicals. Users of Ansell products must ensure that they undertake their own testing within their own work environment to ensure that the Ansell products are suitable for the intended task. No reliance may be made on this guide as evidence of the efficacy or fit for purpose of these gloves. See <http://www.ansell.com/en/Legal/Disclaimer.aspx> for additional information.

ADDITIONAL INFLUENCING FACTORS

Comfort

Regardless of the application, look for a lightweight solution that incorporates suitable liner materials to ensure the highest protection is also comfortable, increasing the likelihood of continual wear and adherence to PPE policy.

Grip

Often the root cause of cut injury is not the most obvious one. Failing to select hand protection with suitable grip can lead to higher injury rates, as objects with sharp edges can slip when being handled — this is exacerbated in the case of wet or oil-covered objects — resulting in a slicing motion through the glove. Insufficient grip can also contribute to other unwanted conditions including stress, fatigue and muscle strain.

Glove coatings

Cut-resistant fabrics are constructed by rolling and twisting cut-resistant fibres to deliver a material that provides suitable defence. When a coating is applied, the fibre's cut-resistance efficacy can be reduced. Most coated gloves will provide a higher resistance on the back of the hand than the palm, as those fibres may not be coated, so this needs to be considered when assessing potential options.

Dexterity

Regardless of the task being undertaken, there will always be demand for a reasonable degree of dexterity. Bulky or ill-fitting options will often lead to removal, so it's important to select a glove that permits the wearer to carry out tasks effectively, while still providing adequate defence.

Construction

Consider the overall construction, as well as the materials used. There are many available solutions, some of which offer specific additional features; consider latex or silicone free alternatives where allergies are a consideration, or an anti-static option if the environment demands it.

Designed for duty

The most suitable length, fit and cuff style will all be determined by the application. Look for a manufacturer that designs hand protection solutions for specific applications and makes industry-specific recommendations for each available alternative, simplifying the decision-making process.

Duty level should also be factored in, as it will influence the longevity of the chosen solution. Cut protection gloves can be divided into three categories depending on the type and risk of danger the gloves should protect against.

LD Light Duty	Glove in this category are not designed for heavy work, and should be worn for light use only
MD Medium Duty	Gloves in this category are designed to withstand comparatively moderate loads, use, or stress
HD Heavy Duty	Gloves in this category are designed to withstand the stresses of hard use or wear

TAKE THE GUESSWORK OUT

With so many potential influences, it makes sense to work with a manufacturer that provides not only detailed product specification information, but also offers a selection assistance service such as Ansell's Guardian. Guardian removes much of the complexity and identifies the optimum solution based on a personalised assessment of the unique exposure conditions in your application.

redefine your
COMFORT ZONE™



Ansell, ® and ™ are trademarks owned by Ansell Limited or one of its affiliates, except as noted. www.ansell.com/patentmarking. © 2018 Ansell Limited. All Rights Reserved.

HyFlex®