

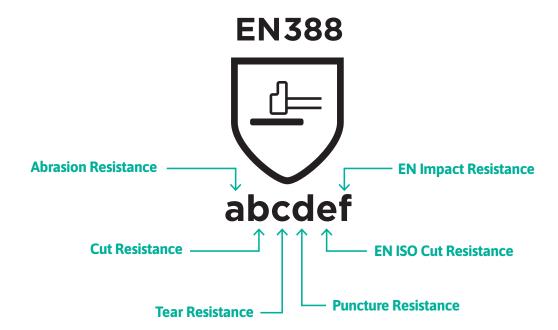
# EN 388:22016+A1:2018 | Performance Ratings

#### **SCOPE**

This standard applies to all kinds of protective gloves and arm protectors in respect of physical and mechanical aggressions caused by abrasion, blade cut, puncture, and tearing and where applicable, impact.

# **DEFINITIONS & REQUIREMENTS**

Protection against mechanical hazards is expressed by a pictogram followed by four numbers (performance levels), each representing test performance against a specific hazard, and two letters. The letter in the fifth position corresponds to an ISO Cut Resistance level as tested with a so-called TDM cut testmachine. A letter "P" in the sixth position is for gloves certified to provide impact protection.



The 'mechanical risks' pictogram is accompanied by a 6-unit code (a-f).

### a. Abrasion Resistance

Based on the number of cycles required to abrade through the sample glove.

#### b. Blade Cut Resistance

Based on the number of cycles required to cut through the sample at a constant speed.

## c. Tear Resistance

Based on the amount of force required to tear the sample.

### d. Puncture Resistance

Based on the amount of force required to pierce the sample with a standard-sized point.

## e. ISO Cut Resistance

Based on the force required to cut through a sample using a specified cut test machine (i.e., Tomodynamometer or TDM) under specified conditions.

## f. EN Impact Protection

Based on the measured transmission of energy and force when the sample experiences a dropped load.

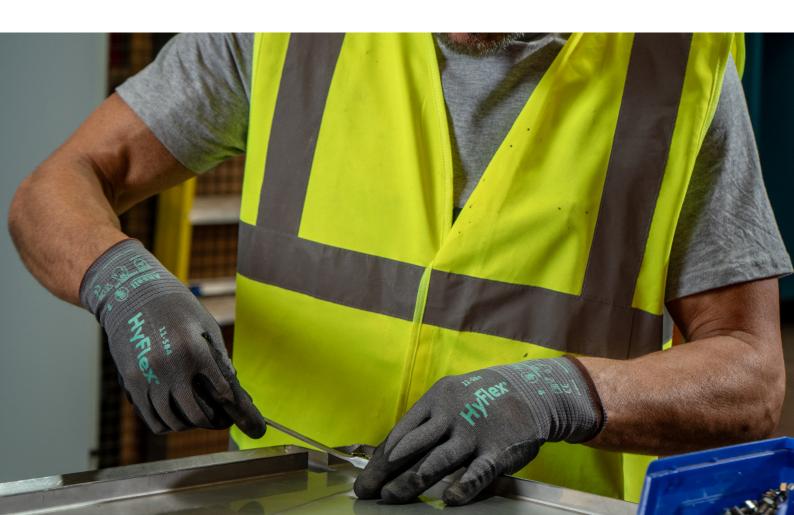
# **EN 388:22016+A1:2018** | Performance Ratings

# **PERFORMANCE LEVEL RATING**

	1	2	3	4	5
<b>a</b> Abrasion Resistance (Cycles)	100	500	2000	8000	-
<b>b</b> Blade Cut Resistance (Coupe Test/Index)	1.2	2.5	5.0	10.0	20.0
C Tear Resistance (newton)	10	25	50	75	-
<b>d</b> Puncture Resistance (newton)	20	60	100	150	_

	A	В	С	D	E	F
e EN ISO Cut Resistance (newton)	2	5	10	15	22	30
<b>f</b> EN Impact Protection	PASS (P) or FAIL (no marking)					

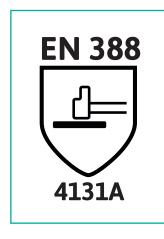
Level X can also be applied for a – f above, which means "not tested" or "not applicable"



# **EN 388:22016+A1:2018** | Glove Markings

# **Performance Ratings**

- The EN 388 shield pictogram can report up to 6 separate mechanical performance measures.
- These ratings include complementary scores for cut performance: the original Blade Cut test score (rating position b) and the EN ISO Cut Resistance score (rating position e).
- In instances where gloves have not been tested with the Blade Cut method or where this test is not applicable to that style (because blade dulling has occurred), the letter X can be used instead of a rating.
- In these instances, Ansell only presents the EN ISO results (see back page for examples).





# EN 388:22016+A1:2018 | Glove Marking Examples

# Gloves with "X" in Pictogram



HyFlex™ **11-731** 



PERFORMANCE LEVEL RATING	
<b>a</b> Abrasion Resistance	4
<b>b</b> Blade Cut Resistance	<b>x</b> ←
<b>C</b> Tear Resistance	4
<b>d</b> Puncture Resistance	2
e EN ISO Cut Resistance (newton)	В
<b>f</b> EN Impact Protection	-

EN Impact Protection does not apply to this glove style.

X indicates that
Ansell has chosen to
only report the cut
resistance for this
style using the EN ISO
Cut Resistance test
method because a
dulling effect occurs
during the
Coupe test.



RINGERS™ R065



PERFORMANCE LEVEL RATING	
<b>a</b> Abrasion Resistance	4
<b>b</b> Blade Cut Resistance	<b>x</b> ←
<b>C</b> Tear Resistance	4
<b>d</b> Puncture Resistance	3
e EN ISO Cut Resistance (newton)	Е
<b>f</b> EN Impact Protection	PASS

EN Impact Protection does apply to this glove style.

The EN ISO cut test is rated from A to F, with F being the highest level of cut resistance, as per this test method.

EN 388 is currently published as EN 388:2016+A1:2018 and is also available as ISO 23388:2018. Both standards are technically identical.

# Explore all EN 388 resources here:

https://www.ansell.com/gb/en/campaigns/enresourcecenter/en-388



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