STANDARDS EXPLAINED

	1	2	3	4	5
Abrasion Resistance (number of rubs)	100	500	2,000	8,000	
Blade Cut Resistance (index)	1.2	2.5	5	10	20
Tear Resistance (newton's)	10	25	50	75	
Puncture Resistance (newton's)	20	60	100	150	

Abrasion	2	1
Cut	1	1
Tear	2	1
Puncture	2	1
Burning behaviour	3	2
Contact heat	1	1
Convective heat	2	–
Small splashes	3	2
Dexterity	1	4

ISO 11611:2007*

This standard specifies minimum basic safety requirements and test methods for protective clothing including hoods, aprons, sleeves and gaiters. These are designed to protect the wearer's body including the head and feet and are to be worn during welding and allied processes with comparable risks. For the protection of the wearer's head and feet, ISO 11611:2007 is only applicable to hoods and gaiters. This type of protective clothing is intended to protect the wearer against spatter (small splashes of molten metal), short contact time with flame, radiant heat from the arc, and minimizes the possibility of electrical shock by short-term, accidental contact with live electrical conductors at voltages up to approximately 100 V d.c. In normal conditions of welding. Sweat, soiling or other contaminants can affect the level of protection provided against short-term accidental contact with live electric conductors at these voltages.

ISO 11611:2007 specifies two classes with specific performance requirements, i.e. Class 1 being the lower level and Class 2 the higher level.

- Class 1 is protection against less hazardous welding techniques and situations, causing lower levels of spatter andradiant heat.

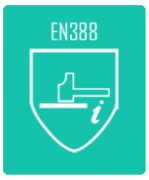
• Class 2 is protection against more hazardous welding techniques and situations, causing higher levels of spatter and radiant heat. For adequate overall protection against the risks to which welders are likely to be exposed, personal protective equipment (PPE) covered by other standards should additionally be worn to protect the head, face, hands and feet.

BS EN ISO 11612:2008* – Protective Clothing to Protect against Heat and Flame

This standard specifies performance requirements for garments made from flexible materials, which are designed to protect the wearer's body (except the hands) from heat and/or flame. The performance requirements set out in BS EN ISO 11612:2008 are applicable to garments which could be worn for a wide range of end uses, where there is a need for clothing with limited flame spread properties and where the user can be exposed to radiant or convective or contact heat or to molten metal splashes. The following parameters are used:

Code A1 – Limited flame spread to outer surface
Code A2 – Limited flame spread to edge
Code B – Convective heat
Code C – Radiant heat
Code D – Molten aluminium splash
Code E – Molten iron splash
Code F – Contact heat

*These standards are now updated to 2015 and all Future Garments products will meet the requirements of the 2015 Standards.



Welding Gloves:

BS EN 388:2016 - 6.1 Resistance to abrasion

The abrasion test, tests the abrasion resistance of material taken from the palm of a glove.

BS EN 388:2016 - 6.2 Blade Cut Resistance (Coupe test)

This test is based on the number of cycles required to cut through the sample at a constant speed and mass when compared to the cut resistance of a standard material e.g. specified cotton canvas.

BS EN 388:2016 - 6.4 Tear Resistance

The test assesses the tear resistance and is based on the amount of force, in Newtons required to tear the sample.

BS EN 388:2016 - 6.5 Puncture Resistance

The test assesses the puncture resistance is based on the amount of force, in Newtons required to pierce the sample with a standard sized nail/stylus.

BS EN 388:2016 - 6.3 Cut Resistance (TDM High Cut Test)

The test assesses the amount of force in newtons required to cut through material unlike the coupe test this is a static not revolving blade. Result is reported as per table 2 - Levels of performance for materials tested with EN ISO 13997 and are typically reported as Level A (2N) , B(5N) , C(10N)...,,,

BS EN 12477

This standard describes how the gloves are designed to provide protection for both hand and wrist while welding or similar work, this is a combination from testing BS EN 388 and BS EN 407. Welding gloves shall provide resistance to small splashes of molten metal, short exposure to convective heat, to radiant heat and to contact heat. The welding gloves shall give protection from mechanical risks as well.

Type A refer to gloves that shall provide a higher protection against heat.

Type B refer to gloves that provide a lower protection against heat but they are more flexible and pliable

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