

Protection Gloves for Firemen

K-TFG9BK Professional Gloves



K-TFG9BK Gloves are products that achieve high degree of "heat protection" and "easiness in motion".

Gunn Cut Sewing

One piece of fabric is used to covers the palm side and sides of the fingers.

Fitting comfort and durability is improved as there is no seam running along the palm side of the fingers.

3D Sewing Method

The parts comprising the palm and back of the hand are cut at uneven lengths, with the palm side shorter.

This is a 3D structure that seeks to pursue ease of grip for the palm of the hand.

Roll Guard

1 sheet of ceramic leather is used to cover the palm up to the fingertips of the back of the hand.

This helps to prevent loose threads around the fingertips, and is effective in absorbing shock and enhancing safety of the fingertips.

Ceramic Leather

This material combines ceramic particles in the process of tanning the hide.

The leather used is combined with ceramic particles, and has enhanced frictional strength.

High Strength Material

Outer material is used para-aramid fibers with high strength, and excellent flame retardancy, heat resistance and cut resistance.

Breathable-Waterproof Material

PU film is laminated on the inner material. In addition to that, we installed an additional single seamless PU film to enhance waterproofness.

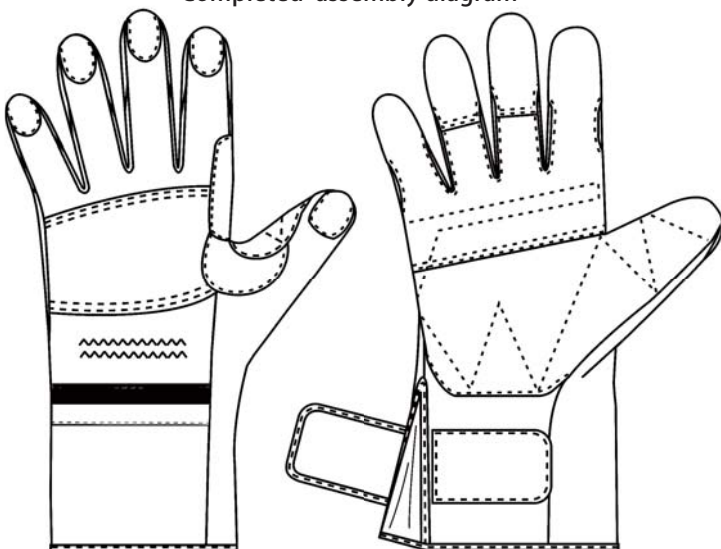
► **Outer material 1:(Back side)**
3layer-laminate knitted fabric
 46% cotton
 28% para-aramide
 19% meta-aramide
 7% polyester, color black

► **Outer material 2:(Palm side)**
2layer-laminate knitted fabric
 53%para-aramide
 34%meta-aramide
 13%polyester
 color black

► **Outer material 3**
 100% cow leather
 color yellow

► **lining 2layer-laminate knitted fabric**
 100%cotton with PU film
 PU Membrane
 color black/white

Completed assembly diagram



Dimensions /weight chart

size		Total Length	Palm width	weight
5	S	27.0 ^{cm}	11.0 ^{cm}	220 ^g
6	M	28.0	11.5	235
7	L	29.0	12.0	245
8	LL	30.0	12.5	260
9	2L	31.0	13.0	275
10	3L	31.5	13.5	300

Unit/cm·g allowance ±3%

Certified



EN 659:2008

CE 0555



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Flame and Thermal Resistance

Property	Requirements	Actual Value		
Thermal Performance Burning behaviour Burning time Glove: 1.glove:3s 2.glove:15s Glove,vertical,middle finger tip Main seam Burning time:15s	no further flaming to top or side no hole formation no flaming,melting drops Performance level 4 afterburn time $\leq 2s$ afterburn time $\leq 5s$	no further flaming to top or side no hole formation no flaming,melting drops 1.afterburn time 0s afterburn time 0s 2.afterburn time 0s afterburn time 1s		EN ISO 6941:2003
	seam closed	seam closed		
Convective heat resistance Heat transfer index HTI24 Outer material 2+outer material 3+lining Outer material 1+ lining	Performance level $\geq 13,0s$	HTI24=31,2s HTI24=16,1s		EN ISO 9151:2013 or EN 367:1992
Radiant heat resistance $q_0=20kW/m^2$ Radiant heat transfer index RHTI4 Outer material 1+lining		RHTI24=36,5s		EN ISO 6942:2002
Contact heat resistance Contact temperature Tc Threshold time Tt Outer material 2+outer material 3 + lining	bei Tc=250°C:Tt $\geq 10s$	Tt=10,2s		EN 702:1994
Contact heat resistance after wet pre-treatment Contact temperature Tc Threshold time Tt Outer material 2+outer material 3 + lining	bei Tc=250°C:Tt $\geq 10s$	Tt=12,2s		EN 702,Nassbehandlung or ISO 15383
Heat resistance of the lining	No melting,dropping or ignition visible	No melting,dropping or ignition visible		ISO 17493
Heat shrinkage Glove Outer material 2 Outer material 3	$\leq 5\%$	Length	Cross	ISO 17493
		-3.8%	-4.6%	
		-1.1%	+2,0%	
		-0.3%	-0.4%	

Mechanical Strength

Property	Requirements	Actual Value		
Abration resistance Outer material 2+outer material 3+lining	Performance level 3 $2000 \leq x < 8000$ Zyklen Performance level 4 $x \geq 8000$ Zyklen	$2000 \leq x < 8000$ Zyklen (Performance level 3)		EN ISO 12947-1:1999-04
Cut resistance Outer material 2+outer material 3+lining Outer material 1+filler+ankle reinforcement+lining	Performance level 2 $2,5 \leq x < 5,0$ Performance level 3 $5,0 \leq x < 10,0$ Performance level 4 $10,0 \leq x < 20,0$ Performance level 5 $x \geq 20,0$	8,9 (Performance level 3) 76,5 (Performance level 5)		EN 388:2003-12
Tear resistance Outer material 2	Performance level 3 $50N \leq x < 75N$ Performance level 4 $x \geq 75N$	Length 87,6N	Cross 78,9N	EN ISO 13937-2:2000
Puncture resistance Outer material 2+ outer material 3+lining	Performance level 3 $100N \leq x < 150N$ Performance level 4 $x \geq 150N$	139N (performance level 3)		EN388:2003-12
Seam breaking strength	$\geq 350N$	602N		EN ISO 13935-2

Other Performance

				ISO15383,EN6530 2005,EN420:2010,ISO3071, EN17075,EN659:2003,
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