
SWAZI®
NEW ZEALAND
The world's most durable outdoor clothing
NEW ZEALAND MADE
ARC SUIT
by SWAZI®

THE SWAZI® ARC SUIT.
CERTIFIED SAFETY CLOTHING THAT WORKS WHEN IT NEEDS TO MOST

The Fabric

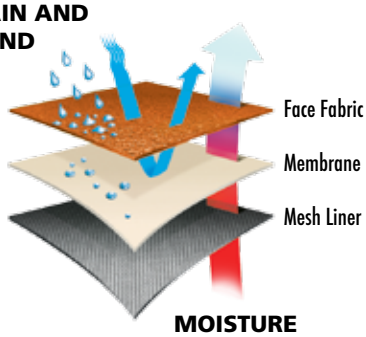
The 3-layered SWAZI AEGIS® fabric developed for the Arc suit provides both an inherently flame retardant and arc-resistant shield. The face, or outer layer, is Nomex®, bonded onto a PFTE (Polytetrafluoroethylene) microporous membrane which allows moisture vapour to pass through one way but does not allow water to penetrate, making it waterproof, windproof and breathable. The third layer is a Nomex® mesh inner, laminated to protect the membrane. The garments Swazi® makes from Arc AEGIS® means your staff are able to work at optimum levels, so safety, comfort and productivity are all operating at maximum output.

Arc Flash

Arcing electrical faults are referred to as "Arc Flash." The resulting heat may reach temperatures in excess of 5000˚C, more than sufficient incident energy to cause serious burns to workers and ignite clothing. It is vital that all practicable measures are taken to protect workers from the extremely dangerous and harmful effects an arc flash presents.

Arc rated fabrics are FR fabrics that have been tested and proven to self extinguish when exposed to an arc event. Typically this testing will specify an Arc Thermal Performance Value *ATPV* in the form of calories/cm^2 , or what is commonly referred to as a *cal rating*. SWAZI AEGIS® is rated at *13 Cal/cm^2*

Synthetic FR garments, made from polyester and nylon should never be worn for electrical work.



The PTFE membrane is totally waterproof. Yet it allows moisture vapour to pass through, thus keeping you dry from both the inside and outside elements.

The Arc Suit

The Arc Suit was specifically designed for use during maintainence of high-voltage power pylons. Three main considerations were integral to the design process.

1. From a health and safety approach, workers needed protection from arc flash, as well as withstanding the rigours of sustained periods of work in extreme weather conditions where hypothermia could result.

2. Workers needed to have a high degree of flexibility, freedom of movement and comfort in all weather.

3. From the contractors perspective, as well as fully meeting the criteria of the first two considerations, an increase in productivity, extra durability and a fit for purpose garment were desired out-comes. The Swazi® Arc Suit meets all 3 criteria.

Tested by the Kinectrics Laboratory at Toronto, Canada, the Swazi fabric returned a rating of 13 Cal/cm^2

The Heat Attenuation Factor test resulted in a HAF of 78%.

Adjustable neck closure

Double breasted Kevlar® chest protection

Reinforced Kevlar® arms on high wear areas

Flexible water resistant cuffs

Karabiner portals help with resisting water/ industrial dust ingress

Articulated knees for enhanced ease of movement

Zippered gusset allows closure over workboots

Rain hood

Karabiner portal

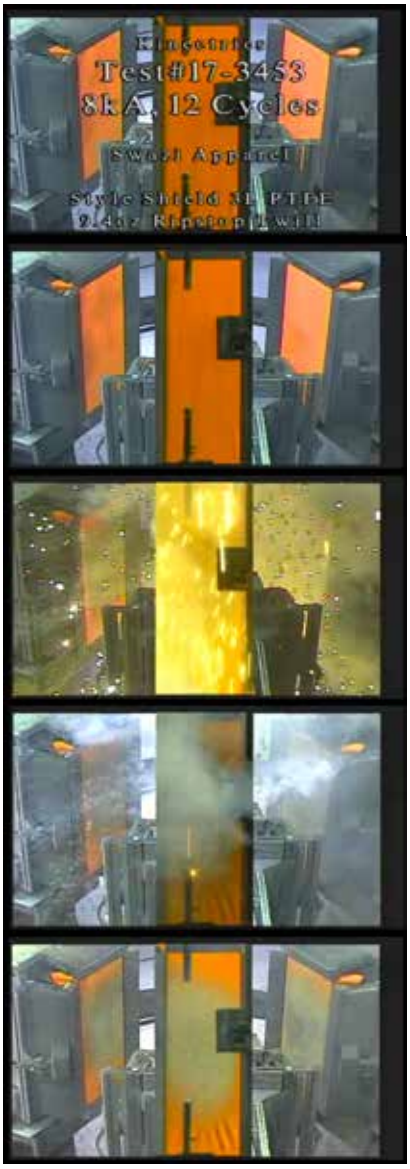
Reinforced Kevlar® seat on high wear areas

Achievements such as the development of the SWAZI Arc AEGIS® fabric have not gone unnoticed, with SWAZI® being named among the finalists at the prestigious New Zealand Energy Excellence Awards.

Arc AEGIS® fabric can be utilised in garments to specifically meet the requirements of your industry. One such example is in blast garments used for power pylon maintenance. The suits not only have to withstand arc-flash incidents, but also provide protection from garnet blasting... and harsh weather.

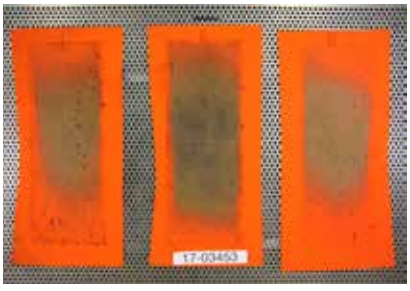
"Fit for Purpose" garments which specifically meet the requirement of your industry can also be designed and manufactured from the AEGIS® fabric.

Call our specialist team to discuss your needs today.



At SWAZI we design and make a wide range of garments for a large number of industries, from thermal Helicopter Suits, to Law Enforcement, and Military wet weather clothing, Search & Rescue Suits - and much more. Our techincal fabrics are independently certified and all garments are Made in New Zealand at our modern plant to the highest standards.

ARC AEGIS® 3L PTFE		RESULT	METHOD
COMPOSITION	Membrane: bi-component PTFE Backing: 100%Nomex Comfort		
WEAVE	Face: Ripstop twill		
SHADE	Orange 36028		
MASS	g/m2	319	AS 2001.2.13:1987
SHRINKAGE	Warp %	-3.5%	ISO 5077:2007
	Weft%	-3.5%	
TENSILE STRENGTH	Warp (N)	1375 N	ISO 13934-1:2013
	Weft (N)	893 (N)	
TEAR STRENGTH	Warp (N)	74 N	ISO 4674-1:2003
	Weft (N)	55 N	
FLAMMABILITY (SURFACE)	Avg. afterflame (s)	0	ISO 15025:2002 Procedure A
	Avg. afterglow (s)	0	
	Hole formation?	No	
	Molten or flaming debris?	No	
FLAMMABILITY (EDGE)	Avg. afterflame (s)	0	ISO 15025:2002 Procedure B
	Avg. afterglow (s)	0	
	Char length (mm)	9	
SPRAY RATING	orginal (%)	5	ISO 4920:2012
	After wash (%)	4	
HYDROSTATIC HEAD	Orginal (kPa)	>150	ISO 811:1981
	After wash (kPa)	149	
Heat Attenuation Factor	Kinectrics lab result	78%	
CAL RATING	Kinectrics lab result	13 cal/cm^2	ISO 17025:2005



Independent testing of our fabrics by agencies such as Kinectrics Laboratory in Canada provide industry with the knowledge and confidence SWAZI® garments will meet their Health and Safety compliance criteria.

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