# HEAT PROTECTION



# OUR MISSION: SAVING LIVES

Our customers are not like other customers. At least their jobs aren't. Our customers' workplaces are often the complete opposite of a nice and cosy office, with a pleasant indoor climate, a comfortable office chair to sit on and coffee within arm's reach. Our customers spend their working days on oil platforms, alongside roads, in ports and in heavy industry. Often the environments are full of risks and the jobs are demanding, sometimes even highly dangerous.

Our mission is to make sure that they come home to their loved ones - every day. This is our reason for being and this is what drives us to go to work every morning. We're not sure if safety is in our genes or if it's developed because of Scandinavia's harsh climate, but safety has always been important in Sweden. Perhaps this is most evident in Swedish industry, which includes Volvo with its safe cars and Autoliv, the world's leading automotive safety supplier.

TST Sweden's motto is saving lives. This is not only our duty, it also makes us feel good. It would be difficult to find anything more meaningful to spend our time on.

Jog Lillienth

Jörgen Lillieroth, Founder and Managing Director, TST Sweden



# **ADVANCED PROTECTIVE EQUIPMENT FOR HEAT PROTECTION**

TST offers a wide range of protection equipment with technically advanced functions, high comfort and high quality. Ever since 1990,

when we developed the first collection of protective clothing for heat protection, we have worked in close consultation with end users.

# **PROTECTION AGAINST RADIANT HEAT**



#### MATERIAL THAT **REFLECTS HEAT**

Our protective clothing against radiant heat is manufactured in aluminum-coated preox PAN / kevlar. The so-called Alu clothes are mostly used in the steel industry and foundries. The clothes reflects up to 95% of the radiant heat and has the highest rating for molten iron and aluminum.

Certified in accordance with EN 11612 - A, B1, C3, D3, E3, F1. See more info on page 11.

#### INSULATING MATERIAL

Silicone-coated e-glass fiber, also called TC, insulates from contact heat. Withstands about 250° C.



Products with this symbol show our protective products for radiant heat.

ALU

# **PROTECTION AGAINST MOLTEN METAL**

Our protective clothing in Marlan® has unique properties and are primarily developed for the aluminium industry. Molten aluminium does not adhere to the fabric and it is both heat and flame resistant according to the classification EN 11612 - A1, B1, C1, D3, E3, F1.

Marlan® provides fantastic comfort because it is so soft and has good ability to absorb moisture. Marlan® also has good anti-static properties because the material is naturally antistatic. Marlan® offers protection against flashes, so-called arc, which can reach temperatures up to 10,000° C. Metal splash can be the result of an electric discharge when anode and cathode meet.

#### MATERIAL WHICH PROTECTS AGAINST SPLASHES

Marlan<sup>®</sup> is primarily developed for the aluminium industry. Molten aluminium does not stick and the fabric is heat and flame-retardant.

Products with this symbol show our protective products for molten metal.

**MARLAN®** 





## HOOD FULL PROTECTION

### NECK- AND HELMET PROT.



Heat protection hood in one piece - provides good protection all around. Cannot be opened at the front. The hood is available with two different visors, for different needs of heat radiation protection. Holder for visor is included.

		/
Transparent visor and helmet	ART. NO.	1010P10 6250
		/
Gold plated visor 3 DIN and helmet	ART. NO.	1010P15 6260



Heat protection covering neck and helmet, with fold-up visor. Available with two different visors, for different needs of heat radiation protection. Holder for visor is included.

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	Transparent visor and helmet	ART. NO.	1010P20 6250
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	Gold plated visor 3 DIN and helmet	ART. NO.	1010P25 6260
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APRON

GAITERS



Gaiters are used on top of ordinary footwear. Adjusted and closed with hooks & loops at the back. Held in place with adjustable strap under the arch of the foot. S/M is recommended up to size. 41. L/XXL from 42-48.

Sizes S/M, L/XXL ART. NO. 1053000 1000



The apron is easy to put on and take off. Adjustable neck and waistband. Length about 125 cm.

1023800 1000

# FIVE FINGER GLOVE SPECIAL



Glove with silicone-coated e-fiberglass/TC on the whole hand and a bit up on the arm. The material provides extra protection against contact heat. Withstands about 250° C. Lining of Kevlar. About 75 cm long. Sold individually.

One size, left	ART. NO.	1000820 1001
One size, right	ART. NO.	1000820 1002

MITTENS



Curved mittens with heat-resistant leather in the palm. Withstands about 250° C. Cotton lining. About 30 cm long. Sold in pairs.

One size	ART. NO. 1000400 1000

# FIVE FINGER GLOVES



Gloves with heat-resistant leather in the palm of the hand. Withstands approx. 250°C. Cotton lining. Length approx. 30 cm. Sold in pairs.

Sizes 8,12	ART. NO.	1000200 1000

#### **ARM PROTECTIONS**



Arm protections that stay securely in place thanks to flexible cuffs at the top and bottom. About 40 cm long. Sold in pairs.



# **COAT FOOTLENGTH**



Foot-length coat with protected hooks&loops closing front or rear. The rear closed is prepared for comfort enhancement spacer pads on the chest. Size S-3XL.



Foot-length coat with closing in the front. Size S-3XL.

Front closed	ART. NO.	1123050 1000

## **COAT KNEELENGTH**



Knee-length coat with protected hooks&loops closing in the front or rear. The rear closed is prepared for comfort-enhancing distance pillows on the chest. Size S-3XL.





Knee-length coat with closing in the front. Size S-3XL.

////			
000	Front closed	ART. NO.	1123450 1000
000			



Jacket with protected hooks&loops closing in the front or rear. The rear closed jacket is prepared for comfort enhancement spacer pads on the chest. Size S-3XL.

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//	Rear closed	ART. NO.	1022000 1000	Ż			Front	clos	sed			ART.	NO		112	2100	1320	
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	Front closed	ART. NO	1022100 1000	$\langle$	$\langle$			$\langle \rangle$	$\langle \rangle$	$\langle \rangle \rangle$	$\langle \rangle$	$\langle \rangle \rangle$	$\langle \rangle$	$\langle \rangle$	$\langle \rangle$	$\geq$		$\geq$
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TROUSERS

# WELDING CLOTH





Trousers with openable legs, making them easy to put on over other clothes. Closes with hooks&loops. Some adjustment of waist size. Size S-3XL.

1030000 1000

With hemmed edge, protection in the corners and eyelets for hanging. Silicone-coated e-fiberglass/TC on one side.

ART. NO.	
Size approx.	1
ART. NO.	





Coat with special pocket for gloves at the back. The pocket has an evacuation at the bottom. The cuffs can be adjusted with hooks&loops. Protected closing in the front with hooks&loops and snaps. Adjustable waist.











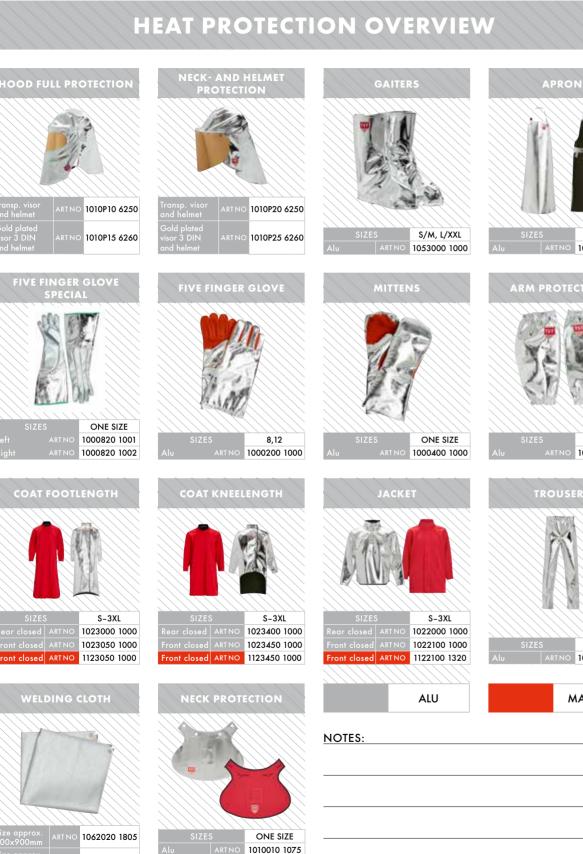
1062020 1805

1062020 1810



Neck protection attached to helmet. Prepared to fit many types of helmets.

One size	ART. NO.	1010010 1075
One size	ART. NO.	1110010 1075



1110010 1075

ARTNO

# MARKED WITH EN 11612 - HEAT AND FLAME

The numbers given together with the flame symbol may have the following values (1 is the lowest value):

- A Flame retardant (-) D - Molten aluminum (1-3)
- B Convection heat (1-3) C - Radiant heat (1-4)

ONE SIZE

1023800 1000

ONE SIZE

1002000 1000

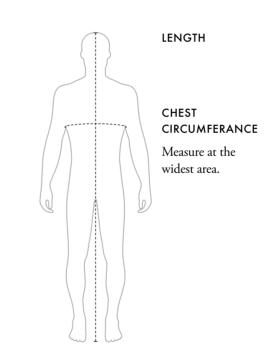
S-3XL

1030000 1000

**MARLAN®** 

E - Molten cast iron (1-3) F - Contact heat (1-3)

# SIZE TABLE AND TECHNICAL SPECIFICATIONS



#### SIZE TABLE (ALL MEASURES IN CM)

Size		Chest circumference
S	<175	92
м	176-180	100
L	181 - 186	108
XL	187-192	116
2XL	193-200	124
3XL	201-206	132

SIZES		S-3XL
Rear closed	ARTNO	1023000 100
Front closed	ARTNO	1023050 100
Front closed	ARTNO	1123050 100

#### WELDING CLOTH



# **TECHNICAL EXPLANATIONS**



#### **TECHNICAL SPECIFICATION MARLAN®**

Clothes, neck protection and other	
Material	Mix of wool and fireproof cellulose fibers
CE-marking	EN 11612 (A1, B1, C1, D3, E3, F1)
Seems	Double
Washing	

#### TECHNICAL SPEC. REFLECTIVE HEAT PROTECTION

Clothes Alu and hood, neck- and helmet prot., gaiters, apron		
Material	70% Preox PAN, 30% Paraaramid	
Coating	Aluminium foil	
CE-marking	EN 11612 (A1,B1,C3,D3,E3,F1)	
Seems	Double	
Washing	Wipe with a damp cloth. No machine wash.	
Five finger glove special		
Material	Silicone coated e-glassfiber/TC on hand and part of arm	
Lining	Kevlar	
CE-marking	EN 407, EN 388	
Temperature resistance	Approx. 250°C	
Five finger glove		
Material	Heat resistant leather in the palm.	
Lining	Cotton	
CE-marking	EN 407, EN 388	
Temperature resistance	Approx. 250°C, time limit 18 s.	
Material	Heat resistant leather in the palm.	
Lining	Cotton + polyester	
CE-marking	EN 407, EN 388	
Temperature resistance	Approx. 250°C	
Welding cloth		
Material	Silicone coated e-glassfiber/TC (one side).	

Certified in accordance with ISO 9001:2015 and ISO 14001:2015

# SAVING LIVES

#### **OUR VALUES**

#### TRUSTWORTHINESS

Through our actions and our products we shall instil a high level of confidence in our customers, suppliers and business partners.

#### LONG-TERM APPROACH

In our internal and external relationships, we shall be considered a long-term partner. Our products shall be developed and marketed with a long-term profile, where we want to see customers and suppliers staying with us year after year.

#### DEVELOPMENTAL

By continuously developing our products and working on innovative new solutions, we will bring products to the market that are of the highest class. Collaborations with universities and suppliers at the forefront of textile materials and treatments are a matter of course for us.

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