



PROTECTIVE INDUSTRIAL PRODUCTS

E-cooline Specification Sheet

E-COOLINE COOLING VEST

PRODUCT DESCRIPTION:

E-Cooline cooling vest.

- High-tech fleece is able to absorb 1-2 liters of water;
- Elastic material allows sufficient space to move;
- No wetness or drop formation;
- Wide velcro strip for the perfect fit.
- Quick-drying outer fabric.

Applications:

For use in foundries, glass plants, injection molding operations, aluminum extrusion, heat treating operations, and in hot environments for protection from the stress of high temperatures.

TECHNICAL DATA:

Material: Outer: 100% polyester; Inner: 100% COOLINE® polyester
Color: Blue

Available Sizes: S - 4XL

Packaging: 1 per zipper bag, 25 per case / 4XL: 20 per case

Case Dimensions (cm): 80 X 40 X 26 / (in): 31.5 x 15.7 x 10.2

Case Weight: 18.0 lbs / 8.2 kg

Manufacturer Certifications: ISO 9001:2000

CE certification for medical application in Europe

Country of Origin/Harmonization Code: Germany/6217.10.9530

Laundering Instructions:

Dry clean, or hand wash in slightly warm water, not exceeding 86 °F (30 °C) with a pH-neutral detergent such as Woolite® no tumbling, no spin-drying, no tumble-drying. For complete drying, air dry for at least 3 days.

USAGE GUIDELINES:

Activation: Soak vest in 1-2 liters of water for max. 5-10 seconds, then squeeze out water and rub with towel.

Storage: Aerated, place on a hanger.

BARCODE # CASE

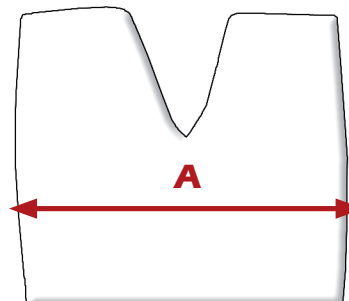
390-1015/4XL	4260205930137
390-1014/3XL	4260205930113
390-1013/XXL	4260205930090
390-1012/XL	4260205930076
390-1011/L	4260205930052
390-1010/M	4260205930038
390-1009/S	4260205930014



DIMENSIONS:

Size Available	S	M	L	XL	XXL
Breast Width (cm)-A	94	100	106	112	120
(in)	37.0	39.4	41.7	44.1	47.2

Size Available	3XL	4XL
Breast Width (cm)-A	128	136
(in)	50.4	53.5



This document is the property of PIP and the information contained herein is proprietary to PIP.



PROTECTIVE INDUSTRIAL PRODUCTS

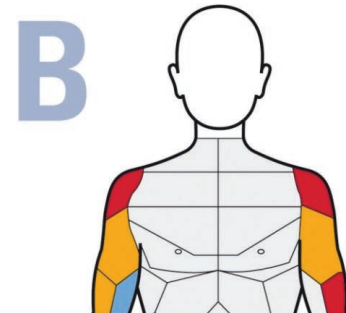
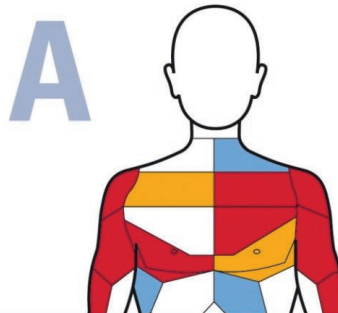
E-cooline Specification Sheet

HEAT STRESS TEST DATA

E.COOLINE WAS TESTED UNDER EXTREME CONDITIONS AND PROVED ITS OUTSTANDING PERFORMANCE

In a stress test with the HENRY High Temperature Mannequin System, which is equivalent to the DuPont Nomex® Thermoman® System*, 122 sensors checked the impact of a heat energy flow of 84 KW/m².

An in-vitro thermokinetic study conducted in a laboratory setting on the high tech material at an environmental temperature of 75°F showed a 11°F temperature reduction to 64°F. At an ambient temperature of 86°F, the temperature of the material was a cool 61°F and was maintained for over 40 hours.



The „THERMOMAN“ study conducted by the Swiss national research institute Empa – Materials Science and Technology in St. Gallen confirmed the effectiveness of E.COOLINE. The parts of the body protected by E.COOLINE showed a lower temperature rise than those not protected by the new high tech fleece.
See Empa Research Report No. 204.369 of 2.2.2006

Percentage surface area of pain and burns after 120 seconds

- none
- pain
- 1st degree burns
- 2nd degree burns
- 3rd degree burns

A Thermoman test without E.COOLINE

B Thermoman test with E.COOLINE

*Nomex® and Thermoman® are registered Trade Marks of E.I. du Pont de Nemours Company

COOLING - THE SYSTEMATIC APPROACH

SCIENTIFIC STUDIES PROVE PERFORMANCE INCREASES UP TO 110%

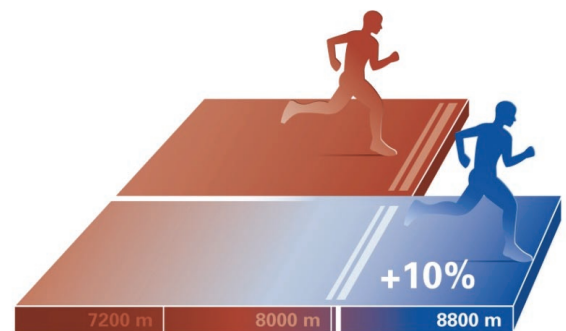
In the human body, around 70% of muscular work is transformed into heat. Elevated temperature and protective clothing increase thermal stress. Concentration and performance suffer with negative impact on productivity for the company and on safety for the individual affected.

Employees in hot workplaces, in which temperatures are significantly in excess of those in the above study, are especially affected. Reduced performance and a threat to the safety of all involved individuals are possible consequences.

E.COOLINE vests were tested in studies by sports scientists at the University of Muenster, Germany. In a randomized field test at high temperatures, the performance in a 1 hour trial at 86°F was up to 10% higher with E.COOLINE vests than without.

COOLINE is a unique cooling system that mimics the natural temperature regulation of the human body and prevents a heat induced drop in performance and concentration. The high tech fleece will hold several times its own weight of water. The water then escapes by evaporation, not by mechanical pressure, resulting in evaporative cooling to cool the body. The functional fibers of the high tech fleece remain absolutely dry on the outside keeping the wearer comfortable.

Compared to cooling vests made with other materials, E.COOLINE activates in seconds, remains dry outside, lasts longer and is proven by scientific institutes.



More energy and performance with E.COOLINE

Dependent on the ambient temperature, the cooling effect is maintained for hours up to several days and is therefore suitable for any period of work and deployment.

This document is the property of PIP and the information contained herein is proprietary to PIP.