

INSPIRED BY NATURE

E.COOLINE reacts similar to the human body cooling its temperature by evaporation of sweat. Rapidly and easily, the high-tech fleece COOLINE SX3 stores water inside which is only released by evaporation. You stay dry and cool.

Save energy! E.COOLINE sweats for you. Feel cool and save energy for work. Despite heat you remain healthier and more active.



EASY HANDLING

- Immerse 5-10 seconds in about 1 liter of water
- Press slightly and wrap in towel
- Start cooling
- The cooling effect will last up to 20 hours



ClimatePartner
climate neutral
Textiles | ID: 53721-1310-1001

MAKE A DIFFERENCE –
SAVE GREENHOUSE GAS EMISSIONS

According to a study of the Kiel Institute for the World Economy, the number of very hot days could dramatically increase due to climate change. Global warming makes many more workers suffer from heat – not only in hot workplaces.

HOW TO FIGHT HEAT?

Many cooling systems consume lots of energy. ACs or frozen pads in clothing are no solution because they just increase greenhouse gas emissions and fuel climate change. A chain reaction causing many more hot days on the long run. Save your planet. Use E.COOLINE which provides effective cooling without any external energy source and no CO₂.



- 1 Shirt-vest available in black. Cooling vest available in blue
- 2 Signal vests with reflective tapes, available in neon yellow and bright orange
- 3 Helmet inlay, available for all standard work helmets
- 4 Bandana, headband, neckband or wristbands, available in different colors



PCS
PERSONAL
COOLING
SYSTEM

- MORE PERFORMANCE
- BETTER HEALTH
- IMPROVED REGENERATION

www.karelinie.de

10%
MORE POWER
ON HOT DAYS



5s
12°C COOLER
IN 5 SECONDS

WWW.E-COOLINE.COM



WWW.E-COOLINE.COM

PLEASE CONTACT US FOR FURTHER
INFORMATION ON OUR WIDE RANGE
OF E.COOLINE PRODUCTS.





SAFETY HEALTH

12°C COOLER

E.COOLINE® is a professional cooling system consisting of high-tech textiles which, if soaked with water, generate a cooling effect depending on ambient and body temperature. The E.COOLINE system mimics the natural temperature regulation of the body. You feel much better and fitter, no matter whether working indoors or outdoors.

SWEATING CONSUMES ENERGY

Regardless of high outside temperatures, more than 70% of energy are transformed into heat during physical work. In heat, this means that the body is extremely strained and consumes a lot of energy by thermoregulation.



HEAT PROTECTION FOR BETTER HEALTH, SAFETY AND PERFORMANCE

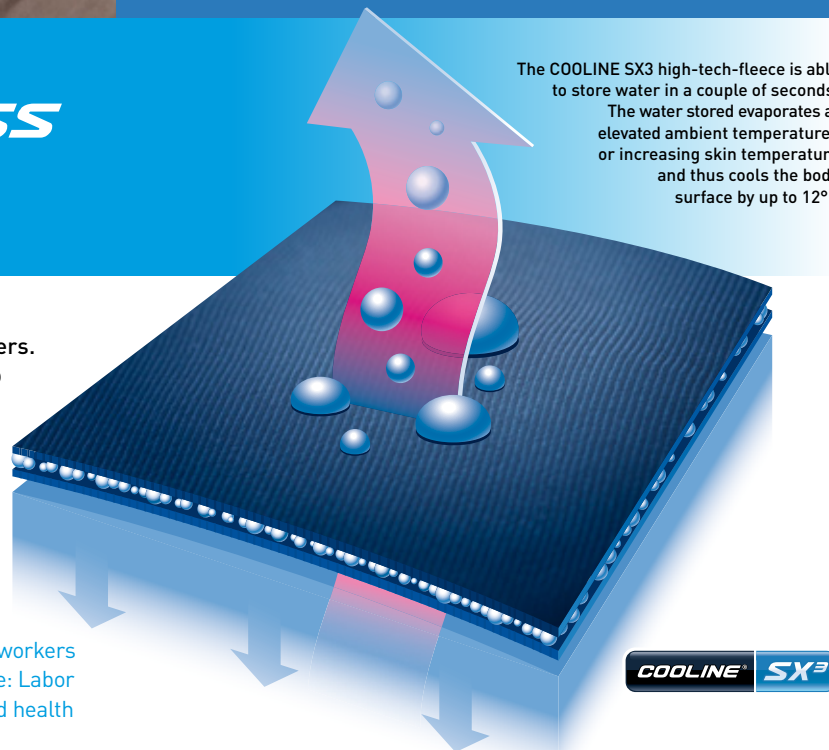
E.COOLINE provides a simple and effective way of cooling. The high-tech product is able to bind high quantities of water in seconds. The water thus stored is only released by evaporation. Due to its special engineering, the product does not drip – even under mechanical pressure. Don't be afraid to get wet.

The effect developed by evaporation cools the body in a natural and individual way: more cooling at high temperatures, less cooling at low temperatures. You will not suffer from "cold shock". Your body will be cooled slowly and the intensity of the cooling effect will adjust to the ambient temperature. After some time, you will no longer perceive the cooling effect because your body has acclimatized.

Depending on ambient and body temperatures, the cooling effect lasts up to 20 hours.

AVOID HEAT STRESS

Heat stress is a high risk for the health and safety of workers. Exposed to high temperatures they often have problems to perform and concentrate efficiently. Protective clothing and equipment even increases the strain on the body. Workplace heat endangers not only workers' H&S but also reduces productivity and as a consequence companies' turnovers, as well.



The COOLINE SX3 high-tech-fleece is able to store water in a couple of seconds. The water stored evaporates at elevated ambient temperatures or increasing skin temperature and thus cools the body surface by up to 12°C

12% INCREASE IN PRODUCTIVITY

The Kiel Institute for Economy informs that 12% of productivity is lost by heat. E.COOLINE provides a simple and effective solution. Endurance tests carried out in scientific studies confirmed an increase in performance of up to 10%. Additionally, the cooling textiles help to improve the cardiovascular and metabolic systems and minimize health risks.

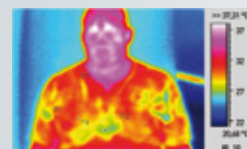
To protect workers from health risks by heat, the VMBG¹, the main professional organization of the metal sector, has issued recommendations to wear cooling vests.

¹www.vmbg.de

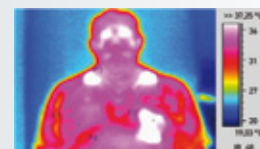
The cooling high-tech fleece E.COOLINE protects workers against heat stress by active cooling. Consequence: Labor productivity is increased and risks of accidents and health problems are reduced.

Hot workplaces are found in numerous sectors, as e.g. in steel works, mining facilities, foundries, fire brigades, building trade, storage areas and road construction.

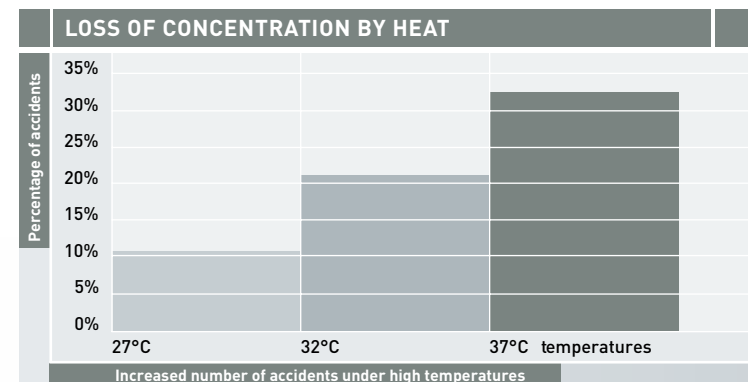
Studies with thermal imaging cameras confirm significantly less stress in workers wearing E.COOLINE



Ø 29,3°C
WITH COOLING



Ø 35,9°C
WITHOUT COOLING



A study carried out by the German Federal Highway Research Institute determined that the accident risk increased by 30% in case of high temperatures in cars. In addition, heat in cars resulted in less concentration. With ambient temperatures of 30°C, driving faults already increased by 20%.

Source: dpa

• 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.

• At 5 kW/m², 10 kW/m² and a flash over, the results of the Empa measurements determined additionally that there existed no elevated risk of steam burns despite the water quantities bound in E.COOLINE.