

PHASECORE

THE SOLUTION TO PERSONAL COOLING

PhaseCore is a phase change material (PCM) that produces a cooling effect by transforming from a solid state to a liquid state when the temperature rises above a certain activation point.

PhaseCore elements are available in a variety of activation points. **PhaseCore 28** and **PhaseCore 32** elements are used for personal cooling. **PhaseCore** elements are made of a non-toxic, non-flammable salt mixture sealed inside a thermal-aluminum wrapper. **PhaseCore** elements are not effected by humidity and react only to direct heat.

Uses: Personal Cooling, Microclimate Cooling, Computer Cooling



PHASECORE HIGHLIGHTS

- Easy to Use and Maintain
- Recharges without Ice, Water, or Refrigeration
- Recharges at Room Temperature
- Non-Toxic, Non-Flammable
- Multiple Applications
- Multiple Activation Points

ADDITIONAL INFORMATION

Effects of Temperature on the Human Body

The normal human body skin temperature is approximately 91.4°F (33°C) and the comfort zone is between 82.4°F (28°C) and 100.4°F (37.8°C). When the human body skin temperature rises above 100.4°F (37.8°C), the start of the heat hazard zone, a person may experience heat stress. A person's body temperature will rise when working in hot environments, during physical activity, and when wearing protective clothing. **PhaseCore** helps the body to cool and maintain its normal skin temperature in hot environments by absorbing body heat. When heat is absorbed, the **PhaseCore** element provides a comfortable and soothing cooling effect. Unlike ice, gel, and other frozen liquids, **PhaseCore** does not overcool or shock the body. Overcooling the body restricts a person's blood flow, making the body uncomfortable, and movement more difficult.

PhaseCore 28 vs. PhaseCore 32

PhaseCore 28 and **PhaseCore 32** both use the same **PhaseCore** technology to produce a cooling effect. **PhaseCore 28** elements are activated at 82.4°F (28°C) and **PhaseCore 32** elements are activated at 89.6°F (32°C). Because **PhaseCore 28** elements have a lower activation point, the cooling effect is stronger but lasts for a shorter period of time. **PhaseCore 32** elements have a higher activation point and the cooling effect is less noticeable, but lasts longer. Generally, we recommend that people use **PhaseCore 28** elements in environments less than 110°F (43°C) and **PhaseCore 32** elements in environments greater than 110°F (43°C).

Recharging PhaseCore

Once **PhaseCore** elements transform from a solid state to a liquid state, the elements must be recharged. **PhaseCore** elements can be recharged by storing the element in an environment less than the activation point. **PhaseCore** elements can be recharged more quickly in colder environments. Refrigeration is not required, but will make the recharge period shorter. **PhaseCore** elements are completely recharged when they return to a solid state. **PhaseCore** is simple, safe, and reusable.



Testing Data and Material Safety Data Sheets (MSDS) are available by request.

PHASECORE PRODUCTS

- SWEDE Cooling Vests
- Standard Cooling Vests
- Mesh Cooling Vests
- Nomex® Cooling Vests
- Athletic Cooling Vests
- ComfortCooling* Hats and Liners
- Transport Bags
- Sport Wraps
- Computer Coolers

SWEDE COOLING VESTS

HEAT STRESS PROTECTION USING PHASECORE

SWEDE Cooling Vests are the best solution to reduce and combat heat stress. SWEDE Cooling Vests use **PhaseCore**, a phase change material (PCM), to provide a cooling effect to the body's core by absorbing body heat.

Users: First Responders/Receivers, HazMat Technicians, Fire Fighters, Bomb Technicians, Law Enforcement Officers, Military Personnel, Industrial Workers

Includes: Vest (Mesh, Polyester, or Nomex®), Set of 22 - **PhaseCore 28** or 32 elements

SWEDE COOLING VEST HIGHLIGHTS

- Multiple Sizes with Padded Shoulders
- Easy to Use and Maintain
- Recharges without Ice, Water, or Refrigeration
- Lightweight and Comfortable Design
- Effective up to 4 hours
- Recharges at Room Temperature
- Non-Toxic
- Machine Washable

SPECIFICATIONS

Vest Style:	Basic	Mesh	Nomex®
Vest Material:	Polyester outer shell, Polyester mesh inner shell	Polyester mesh	Nomex® outer shell, Polyester mesh inner shell
Color:	Gray	Black	White
Weight:	4.4 lbs. (2 kg)	4.25 lbs. (1.9 kg)	4.75 lbs. (2.15 kg)
PhaseCore Element:	Each vest contains 22 PhaseCore elements, which are made of a non-toxic, non-flammable salt mixture sealed inside an aluminum wrapper.		

ADDITIONAL INFORMATION

How does it work?

SWEDE Cooling Vests are fitted with a set of 22 - **PhaseCore 28** or **PhaseCore 32** elements, which have an activation point of 82.4°F (28°C) or 89.6°F (32°C), respectively. When the body temperature rises above this point, the elements begin to absorb body heat. When heat is absorbed, the **PhaseCore** elements provide a comfortable and soothing cooling effect. SWEDE Cooling Vests hold **PhaseCore** elements close to the body allowing them to absorb heat most effectively.

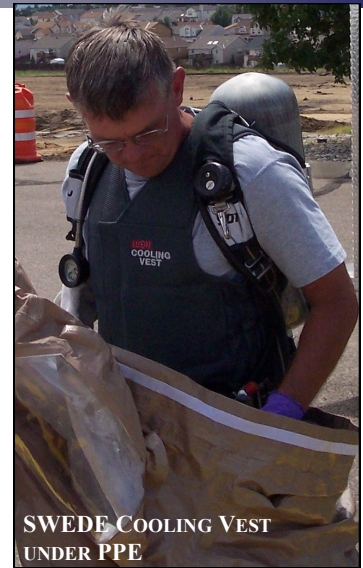
Is it effective?

Tests completed in a hot environment showed that an individual wearing a SWEDE Cooling Vest with **PhaseCore 28** experienced only a 3.6°F (2°C) rise in body surface temperature while an individual without a SWEDE Cooling Vest experienced a 12.6°F (7°C) rise in body surface temperature. SWEDE Cooling Vests are effective for up to 4 hours, actual time varies based on physical activity, body type, and the environmental conditions.

How does it recharge?

SWEDE Cooling Vests can be recharged by storing the **PhaseCore** elements in an environment less than the activation point. **PhaseCore** elements can be recharged more quickly in colder environments. Refrigeration is not required, but will make the recharge period shorter. **PhaseCore** elements are completely recharged when they return to a solid state. **PhaseCore** is simple, safe, and reusable.

Style	BASIC	NOMEX®	MESH	BASIC	NOMEX®	MESH
	PhaseCore 28			PhaseCore 32		
S-M	D35-5282	35-5282N	D35-5262	D35-5292	35-5292N	D35-5272
L-XL	D35-5284	35-5284N	D35-5264	D35-5294	35-5294N	D35-5274
2XL-3XL	D35-5285	35-5285N	D35-5265	D35-5295	35-5295N	D35-5275
4XL-5XL	D35-5286	35-5286N	D35-5266	D35-5296	35-5296N	D35-5276
Single PhaseCore 28 Element			35-0028	Single PhaseCore 32 Element		35-0032
Set of 22 PhaseCore 28 Elements			35-2228	Set of 22 PhaseCore 32 Elements		35-2232



SWEDE COOLING VEST UNDER PPE



SIZE CHART

Size	Chest Width
S-M	33-39 inches
L-XL	39-46 inches
2XL-3XL	46-52 inches
4XL-5XL	52-63 inches

STANDARD COOLING VESTS

HEAT STRESS PROTECTION USING PHASECORE

Standard Cooling Vests are a great solution to reduce and combat heat stress. Standard Cooling Vests use **PhaseCore**, a phase change material (PCM), to provide a cooling effect to the body's core by absorbing body heat. The Standard Cooling Vest has a two-piece, over the shoulder design that makes it extremely comfortable when worn under another vest or when sitting.

Users: Law Enforcement Officers, Automobile Drivers, Wheelchair Users, Industrial Workers, X-ray Technicians, Surgeons, Custodial Engineers

Includes: Vest (Mesh, Polyester, or Nomex®), Set of 16 - **PhaseCore** 28 or 32 Elements

STANDARD COOLING VEST HIGHLIGHTS

- Recharges at Room Temperature
- Recharges without Ice, Water, or Refrigeration
- Lightweight and Comfortable Design
- Machine Washable
- Effective up to 3 hours
- Easy to Use and Maintain
- One Size Fits Most
- Non-Toxic

SPECIFICATIONS

Vest Cut:	Basic	Mesh	Nomex®
Vest Material:	Polyester outer shell, Polyester mesh inner shell	Polyester mesh shell	Nomex® outer shell, Polyester mesh inner shell
Color:	Gray or White	Black	White
Weight:	3.25 lbs. (1.5 kg)	3.2 lbs. (1.4 kg)	3.75 lbs. (1.7 kg)
PhaseCore Element:	Each vest contains 16 PhaseCore elements, which are made of a non-toxic, non-flammable salt mixture sealed inside an aluminum wrapper.		

ADDITIONAL INFORMATION

How does it work?

Standard Cooling Vests are fitted with a set of 16 - **PhaseCore** 28 or **PhaseCore** 32 elements, which have an activation point of 82.4°F (28°C) or 89.6°F (32°C), respectively. When the body temperature rises above this point, the elements begin to absorb body heat. When heat is absorbed, the **PhaseCore** elements provide a comfortable and soothing cooling effect. Standard Cooling Vests hold **PhaseCore** elements close to the body allowing them to absorb heat most effectively.

Is it effective?

Tests completed in a hot environment have proven that **PhaseCore** technology is effective in helping to combat the rise in a person's body surface temperature when in a hot environment. Standard Cooling Vests are effective for up to 3 hours, actual time varies based on physical activity, body type, and the environmental conditions.

How does it recharge?

Standard Cooling Vests can be recharged by storing the **PhaseCore** elements in an environment less than the activation point. **PhaseCore** elements can be recharged more quickly in colder environments. Refrigeration is not required, but will make the recharge period shorter. **PhaseCore** elements are completely recharged when they return to a solid state. **PhaseCore** is simple, safe, and reusable.

Style	BASIC	NOMEX®	MESH	BASIC	NOMEX®	MESH
Color	PhaseCore 28			PhaseCore 32		
Gray	DC1-30280H	-	-	DC1-30290H	-	-
White	DC1-30280A	C5-40280N	-	DC1-30290A	C5-40290N	-
Black	-	-	C1-30480W	-	-	C1-30490W
Single PhaseCore 28 Element			35-0028	Single PhaseCore 32 Element		35-0032
Set of 16 PhaseCore 28 Elements			35-1628	Set of 16 PhaseCore 32 Elements		35-1632



SIZE CHART

Size	Chest Width
One Size	33-50 inches

MESH COOLING VESTS

HEAT STRESS PROTECTION USING PHASECORE

Mesh Cooling Vests are a great solution to reduce and combat heat stress. Mesh Cooling Vests use **PhaseCore**, a phase change material (PCM), to provide a cooling effect to the body's core by absorbing body heat. Mesh Cooling Vests are extremely lightweight and are comfortable for use under body armor and other form-fitting protective apparel.

Users: Law Enforcement, Military, Crime Scene Investigators, Industrial Workers

Includes: Mesh Vest, Set of 16 or 22 **PhaseCore** 28 or 32 Elements

MESH COOLING VEST HIGHLIGHTS

- Recharges at Room Temperature
- Recharges without Ice, Water, or Refrigeration
- Lightweight and Comfortable Design
- Machine Washable
- Effective up to 4 hours
- Easy to Use and Maintain
- Utility Belt Cut Out
- Non-Toxic

SPECIFICATIONS

Vest Cut:	Standard Mesh	SWEDE Mesh
Vest Material:	Polyester mesh shell	Polyester mesh shell
Color:	Black	Black
Weight:	3.5 lbs. (1.6 kg)	4.25 lbs. (1.9 kg)
Number of PhaseCore :	16	22
PhaseCore Element:	Non-toxic, non-flammable salt mixture sealed in an aluminum wrapper.	

ADDITIONAL INFORMATION

How does it work?

Mesh Cooling Vests are fitted with a set of 16 - **PhaseCore** 28 or **PhaseCore** 32 elements (Standard Mesh) or 22 - **PhaseCore** 28 or **PhaseCore** 32 elements (SWEDE Mesh). **PhaseCore** 28 elements have an activation point of 82.4°F (28°C) and **PhaseCore** 32 elements have an activation point of 89.6°F (32°C). When the body temperature rises above this point, the elements begin to absorb body heat. When heat is absorbed, the **PhaseCore** elements provide a comfortable and soothing cooling effect. Mesh Cooling Vests hold **PhaseCore** elements close to the body allowing them to absorb heat most effectively.

Is it effective?

Tests completed in a hot environment have proven that **PhaseCore** technology is effective in helping to combat the rise in a person's body surface temperature when in a hot environment. Mesh Cooling Vests are effective for up to 4 hours, actual time varies based on physical activity, body type, environmental conditions, and vest cut.

How does it recharge?

Mesh Cooling Vests can be recharged by storing the **PhaseCore** elements in an environment less than the activation point. **PhaseCore** elements can be recharged more quickly in colder environments. Refrigeration is not required, but will make the recharge period shorter. **PhaseCore** elements are completely recharged when they return to a solid state. **PhaseCore** is simple, safe, and reusable.

Style	STANDARD		SWEDE	
	PhaseCore 28	PhaseCore 32	PhaseCore 28	PhaseCore 32
One Size	DC1-30480W	-	DC1-30490W	-
S-M	-	D35-5262	-	D35-5272
L-XL	-	D35-5264	-	D35-5274
2XL-3XL	-	D35-5265	-	D35-5275
4XL-5XL	-	D35-5266	-	D35-5276
Single PhaseCore 28 Element	35-0028	Single PhaseCore 32 Element	35-0032	
Set of 16 PhaseCore 28 Elements	35-1628	Set of 16 PhaseCore 32 Elements	35-1632	
Set of 22 PhaseCore 28 Elements	35-2228	Set of 22 PhaseCore 32 Elements	35-2232	



STANDARD MESH COOLING VEST



SWEDE MESH COOLING VEST



SIZE CHART

Size	Chest Width
S-M	33-39 inches
L-XL	39-46 inches
2XL-3XL	46-52 inches
4XL-5XL	52-63 inches
One Size	33-50 inches

NOMEX® COOLING VESTS

HEAT STRESS PROTECTION USING PHASECORE

Nomex® Cooling Vests are the best solution to reduce and combat heat stress in electrical and fire hazard environments where flammability protection is required. Nomex® Cooling Vests use **PhaseCore**, a phase change material (PCM), to provide a cooling effect to the body's core by absorbing body heat. The Nomex® material is flame retardant.

Users: Structural Fire Fighters, Electrical Workers, Race Car Drivers, Bomb Technicians, HazMat Technicians, Military, First Responders/Receivers, Industrial Workers

Includes: Nomex® Vest, Set of 16 or 22 - **PhaseCore** 28 or 32 Elements

NOMEX® COOLING VEST HIGHLIGHTS

- Recharges at Room Temperature
- Recharges without Ice, Water, or Refrigeration
- Lightweight and Comfortable Design
- Machine Washable
- Effective up to 4 hours
- Easy to Use and Maintain
- Multiple Sizes
- Non-Toxic, Non-Flammable

SPECIFICATIONS

Vest Cut:	Standard	SWEDE
Vest Material:	Nomex® outer shell, Polyester mesh inner shell	Nomex® outer shell, Polyester mesh inner shell
Color:	White	White
Weight:	3.75 lbs. (1.7 kg)	4.75 lbs. (2.15 kg)
Number of PhaseCore :	16	22
PhaseCore Element:	Non-toxic, non-flammable salt mixture sealed in an aluminum wrapper.	

ADDITIONAL INFORMATION

How does it work?

Nomex® Cooling Vests are fitted with a set of 16 - **PhaseCore** 28 or **PhaseCore** 32 elements (Standard Mesh) or 22 - **PhaseCore** 28 or **PhaseCore** 32 elements (SWEDE Mesh). **PhaseCore** 28 elements have an activation point of 82.4°F (28°C) and **PhaseCore** 32 elements have an activation point of 89.6°F (32°C). When the body temperature rises above this point, the elements begin to absorb body heat. When heat is absorbed, the **PhaseCore** elements provide a comfortable and soothing cooling effect. Nomex® Cooling Vests hold **PhaseCore** elements close to the body allowing them to absorb heat most effectively.

Is it effective?

Tests completed in a hot environment have proven that **PhaseCore** technology is effective in helping to combat the rise in a person's body surface temperature when in a hot environment. Nomex® Cooling Vests are effective for up to 4 hours, actual time varies based on physical activity, body type, environmental conditions, and vest cut.

How does it recharge?

Nomex® Cooling Vests can be recharged by storing the **PhaseCore** elements in an environment less than the activation point. **PhaseCore** elements can be recharged more quickly in colder environments. Refrigeration is not required, but will make the recharge period shorter. **PhaseCore** elements are completely recharged when they return to a solid state. **PhaseCore** is simple, safe, and reusable.



Style	STANDARD	SWEDE	STANDARD	SWEDE
	PhaseCore 28		PhaseCore 32	
One Size	C5-40280N	-	C5-40290N	
S-M	-	35-5282N	-	35-5292N
L-XL	-	35-5284N	-	35-5294N
2XL-3XL	-	35-5285N	-	35-5295N
4XL-5XL	-	35-5286N	-	35-5296N
Single PhaseCore 28 Element		35-0028	Single PhaseCore 32 Element	35-0032

SIZE CHART

Size	Chest Width
S-M	33-39 inches
L-XL	39-46 inches
2XL-3XL	46-52 inches
4XL-5XL	52-63 inches
One Size	33-50 inches

COMFORTCOOLING* HATS

HEAT STRESS PROTECTION USING PHASECORE

ComfortCooling* Hats are more than ordinary sun hats. They are a great accessory to help reduce and combat heat stress. ComfortCooling* Hats have a Velcro® liner with **PhaseCore**, a phase change material (PCM), to provide a cooling effect by absorbing heat from your head and helping to keep you comfortable.

Users: Beach, Daily Use, Sporting Events, Bicycle Riding, Amusement Parks, Gardening

Includes: ComfortCooling* Hat, **PhaseCore** Hat Liner

COMFORTCOOLING* HAT HIGHLIGHTS

- Velcro® **PhaseCore** 28 Liner
- Recharges without Ice, Water, or Refrigeration
- Lightweight and Comfortable Design
- Machine Washable
- Effective For Hours
- Easy to Use and Maintain
- Multiple Hat Sizes
- Non-Toxic

SPECIFICATIONS

ComfortCooling* Hats with PhaseCore

Hat Material: Polyester outer shell, Polyester mesh **PhaseCore** Liner with Velcro®

Color: Beige, Blue, White

Weight: .45 lbs. (.2 kg); **PhaseCore** Hat Liner: .35 lbs. (.16 kg)

Number of **PhaseCore**: 5 (inside **PhaseCore** Hat Liner)

PhaseCore Element: Non-toxic, non-flammable salt mixture sealed inside an aluminum wrapper

ADDITIONAL INFORMATION

How does it work?

ComfortCooling* Hats are fitted with a set of 5 **PhaseCore** 28 elements, which have an activation point of 82.4°F (28°C). When the body temperature rises above this point, the elements begin to absorb body heat. When heat is absorbed, the **PhaseCore** elements provide a comfortable and soothing cooling effect. ComfortCooling* Hats hold **PhaseCore** 28 elements above the head allowing for them to absorb heat from your head most effectively.

Is it effective?

Tests completed in a hot environment showed that an individual wearing a ComfortCooling* Hat with **PhaseCore** 28 experienced only a .9°F (.5°C) drop in head surface temperature. ComfortCooling* Hats are effective for hours, actual time varies based upon physical activity and the environmental conditions.

How does it recharge?

ComfortCooling* Hats can be recharged by storing the **PhaseCore** elements in an environment less than the activation point. **PhaseCore** elements can be recharged more quickly in colder environments. Refrigeration is not required, but will make the recharge period shorter. **PhaseCore** elements are completely recharged when they return to a solid state. **PhaseCore** is simple, safe, and reusable.



BEIGE



BLUE



WHITE



PHASECORE HAT LINER

Color	PhaseCore 28		
	BEIGE	BLUE	WHITE
Small	C7-10281B	C7-10281M	C7-10281W
Medium	C7-10282B	C7-10282M	C7-10282W
Large	C7-10283B	C7-10283M	C7-10283W
X-Large	C7-10284B	C7-10284M	C7-10284W
PhaseCore 28 Hat Liner, Black			C7-15280Z

SIZE CHART	
Size	Head Circumference
S	~21.7 inches
M	~22.4 inches
L	~23.2 inches
XL	~24.0 inches

PHASECORE TRANSPORT BAG

STORE AND RECHARGE PHASECORE PRODUCTS ON THE GO

The **PhaseCore** Transport Bag is a great solution for transporting and storing **PhaseCore** elements and Cooling Vests in warm environments. Its special thermal lining isolates **PhaseCore** elements from the outside environment and protect them. The mesh zipper lining allows easy access to ice packs.

Users: Job Sites, Field Crews, Response Teams, Outdoor Adventurers, Ambulance Squads

Includes: Transport Bag, Shoulder Strap, 5 Ice Packs



PHASECORE TRANSPORT BAG HIGHLIGHTS

- Holds up to 3 Cooling Vests
- Lightweight & Comfortable
- Thermal Insulating Lining
- Shoulder Strap
- Includes 5 Ice Packs
- Double Zipper Opening

SPECIFICATIONS

PhaseCore Transport Bag

Bag Material:	Polyester shell, Thermal inner lining
Color:	Gray
Dimensions:	20 x 16 x 12 in. (50 x 40 x 30 cm)
Weight:	5 lbs. (2.2 kg)
Cooling Method:	5 freezer ice packs



ADDITIONAL INFORMATION

How does it work?

The **PhaseCore** Transport Bag uses freezer ice packs and a special thermal lining to regulate the temperature around **PhaseCore** Cooling garments and elements. The thermal lining helps to insulate the five frozen ice packs to create the ideal temperature inside the Transport Bag to store **PhaseCore** Cooling garments and elements. **PhaseCore** elements can also be recharged by being placed inside the **PhaseCore** Transport Bag when the ice packs are actively cold. Use the **PhaseCore** Transport Bag for transport and daily storage of **PhaseCore** Cooling garments and elements.

Is it effective?

Tests completed in a hot environment demonstrated that the **PhaseCore** Transport Bag is capable of keeping three SWEDE Cooling Vests with **PhaseCore** 28 Elements fully charged for a complete 8 hour work shift in 95°F (35°C) heat.

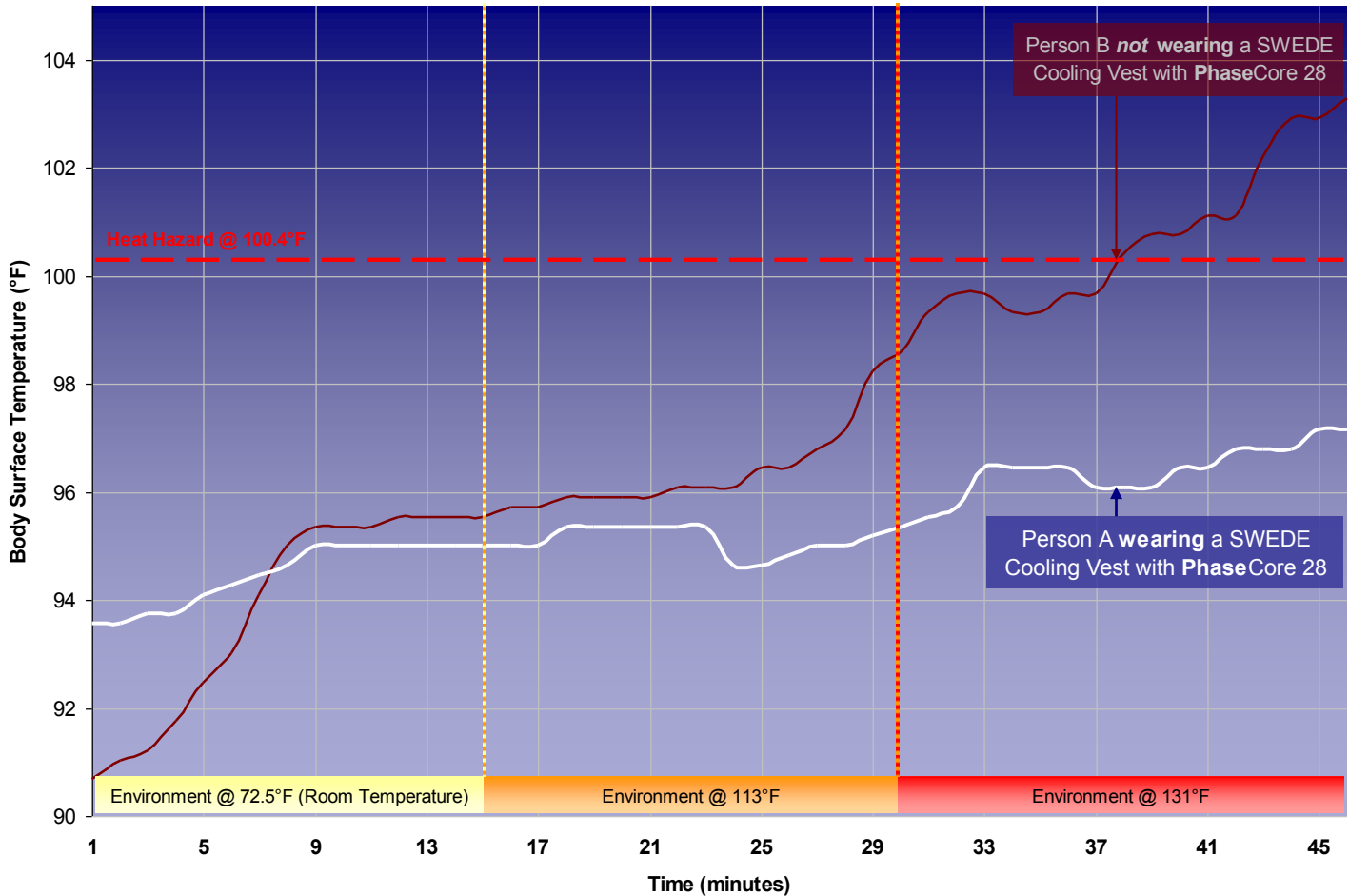
How does it recharge?

The five (5) ice packs in the **PhaseCore** Transport Bag must be frozen before each use. The ice packs take 6-8 hours to recharge in a freezer.

ITEM	MODEL #
PhaseCore Transport Bag	C9-0001H
Single Ice Pack	C9-1001H
Set of 5 Ice Packs	C9-5001H

SWEDE COOLING VEST TESTING

THE SOLUTION TO PERSONAL COOLING



This test was conducted with two test subjects. Person A was wearing the SWEDE Cooling Vest with PhaseCore 28 and Person B was not wearing the SWEDE Cooling Vest. Both subjects had their body surface temperatures measured over a 45 minute period. For the first 15 minutes both subjects were in a 72.5°F (22.5°C) room temperature environment. After 15 minutes, both subjects were moved into a controlled 113°F (45°C) environment. After another 15 minutes, both subjects were moved into a 131°F (55°C) environment with high humidity. Testing was stopped after 45 minutes when the Person B, who was not wearing the SWEDE Cooling Vest, began experiencing symptoms of heat stress. Person A showed no symptoms of heat stress. **This test shows how the SWEDE Cooling Vest is effective in preventing heat stress and helping the body maintain a constant body temperature in extreme environments.**



Testing was conducted by ComfortCooling AB in Kinna, Sweden in April 2004 under controlled environments with two test subjects.

PHASECORE 28 ELEMENTS

THE SOLUTION TO PERSONAL COOLING

PhaseCore 28 is a non-toxic, non-flammable phase change material (PCM) made of a salt blend that is sealed inside of an aluminum wrapper. It changes from solid to liquid and back again depending on the surrounding temperature. **PhaseCore 28** elements are not effected by humidity and react to direct heat. Garments in a variety of styles and materials are designed to utilize the cooling effects of **PhaseCore 28** elements to reduce heat stress.

Uses: Personal Cooling, Microclimate Cooling, Computer Cooling

Includes: PhaseCore Material (Salt Blend), Aluminum Wrapper, Label

PHASECORE 28 ELEMENT HIGHLIGHTS

- Recharges at Room Temperature
- Recharges without Ice, Water, or Refrigeration
- Easy to Use and Maintain
- Effective For Hours
- Reusable
- Non-Toxic, Non-Flammable

SPECIFICATIONS

	Small	Large	Hat Liner
Activation Point:	82.4°F (28°C)	82.4°F (28°C)	82.4°F (28°C)
Dimension:	5.1 x 1.6 x .3 in. (130 x 40 x 8 mm)	5.1 x 3.1 x .3 in. (130 x 80 x 8 mm)	8 in. diameter (20 cm diameter)
Weight:	1.75 oz (50 g)	3.5 oz (100 g)	.35 lbs. (.15 kg)
PhaseCore Element:	Non-toxic, non-flammable salt mixture sealed inside an aluminum wrapper.		

ADDITIONAL INFORMATION

How does it work?

PhaseCore 28 elements have an activation point of 82.4°F (28°C). When the ambient temperature rises above this point, the element begins to absorb heat energy and transforms from a solid to a liquid. **PhaseCore 28** elements will remain at its activation point as the heat energy is absorbed and stored. When heat is absorbed, the **PhaseCore** elements provide a comfortable and soothing cooling effect. **PhaseCore** elements recharge and return to their solid state when the ambient temperature drops below the activation point. **PhaseCore 28** elements have a 10 year or 6,000 cycle life.

Is it effective?

Tests completed in a hot environment have proven that **PhaseCore 28** technology is effective in helping to combat the rise in a person's body surface temperature when in a hot environment. **PhaseCore** elements are effective for up to 4 hours, actual time varies based on physical activity, body type, environmental conditions, and garment.

How does it recharge?

PhaseCore 28 elements can be recharged by storing them in an environment less than the activation point of 82.4°F (28°C). **PhaseCore** elements can be recharged more quickly in colder environments. Refrigeration is not required, but will make the recharge period shorter. Use of **PhaseCore** elements after refrigeration or freezing can prolong and enhance the cooling effect. **PhaseCore** elements are completely recharged when they return to a solid state. **PhaseCore** is simple, safe, and reusable.

DESCRIPTION	MODEL	VEST STYLE
PhaseCore 28		
Single PhaseCore 28 Small Element	35-0028S	
Single PhaseCore 28 Large Element	35-0028	
Single PhaseCore 28 Hat Liner	C7-15280Z	
Set of 16 PhaseCore 28 Elements	35-1628	Standard
Set of 22 PhaseCore 28 Elements	35-2228	SWEDE
Set of 26 PhaseCore 28 Elements	35-2628	Athletic



PHASECORE 28 ELEMENT



PHASECORE 28 HAT LINER



SWEDE COOLING VEST



STANDARD COOLING VEST

Testing Data and Material Safety Data Sheets (MSDS) are available by request.

PHASECORE 32 ELEMENTS

THE SOLUTION TO PERSONAL COOLING

PhaseCore 32 is a non-toxic, non-flammable phase change material made of a salt mixture that is sealed inside of a special wrapper. It changes from solid to liquid and back again depending on the surrounding temperature. **PhaseCore 32 Elements** are not effected by humidity and react to direct heat above its activation point. Garments in a variety of cuts and materials are designed to utilize the higher activation point cooling effect of **PhaseCore 32 Elements** to reduce heat stress.

Uses: Personal Cooling, Microclimate Cooling, Computer Cooling

Includes: PhaseCore Material (Salt Blend), Aluminum Wrapper, Label

PHASECORE 32 ELEMENT HIGHLIGHTS

- Higher activation point for Cooling
- Recharges without Ice, Water, or Refrigeration
- Easy to Use and Maintain
- Effective for Hours
- Reusable
- Non-toxic, Non-Flammable

SPECIFICATIONS

	Small	Large
Activation Point:	89.6°F (32°C)	89.6°F (32°C)
Dimension:	5.1 x 1.6 x .3 in. (130 x 40 x 8 mm)	5.1 x 3.1 x .3 in. (130 x 80 x 8 mm)
Weight:	1.75 oz (50 g)	3.5 oz (100 g)
PhaseCore Element:	Non-toxic, non-flammable salt mixture sealed inside an aluminum wrapper.	

ADDITIONAL INFORMATION

How does it work?

PhaseCore 32 elements have an activation point of 90°F (32°C). When the ambient temperature rises above this point, the element begins to absorb heat energy and transforms from a solid to a liquid. **PhaseCore 32** elements will remain at its activation point as the heat energy is absorbed and stored. When heat is absorbed, the **PhaseCore** elements provide a comfortable and soothing cooling effect. **PhaseCore** elements recharge and return to their solid state when the ambient temperature drops below the activation point. **PhaseCore 32** elements have a 10 year or 6,000 cycle life.

How does it recharge?

PhaseCore 32 elements can be recharged by storing them in an environment less than the activation point of 90°F (32°C). **PhaseCore** elements can be recharged more quickly in colder environments. Refrigeration is not required, but will make the recharge period shorter. Use of **PhaseCore** elements after refrigeration or freezing can prolong and enhance the cooling effect. **PhaseCore** elements are completely recharged when they return to a solid state. **PhaseCore** is simple, safe, and reusable.

When Should I Use PhaseCore 32 and not PhaseCore 28?

In extreme heat environments we recommend the use of **PhaseCore 32** to cool the body. **PhaseCore 32** will produce a cooling effect for a longer duration than **PhaseCore 28** in extremely hot environments due to the higher activation point and high heat absorption capacity. **PhaseCore 32** is recommended for users in environments greater than 110°F (43°C) for a prolonged period of time. In most of the products you can switch between **PhaseCore 28** and **32** easily. Please refer to the individual product specifications for details.

DESCRIPTION	MODEL	VEST STYLE
PhaseCore 32		
Single PhaseCore 32 Small Element	35-0032S	
Single PhaseCore 32 Large Element	35-0032	
Set of 16 PhaseCore 32 Elements	35-1632	Standard
Set of 22 PhaseCore 32 Elements	35-2232	SWEDE



PHASECORE 32 ELEMENT



SWEDE COOLING VEST



SWEDE MESH COOLING VEST



STANDARD COOLING VEST

Testing Data and Material Safety Data Sheets (MSDS) are available by request.