PEAK FOOTWEAR & CLOTHING TECH MANUAL

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PEAK has been devoting itself to providing the most comfortable and functional sports products. Comfortable and reliable sports products help you give full play to your potential.

After long-term research and accumulation, we have developed special PEAK scientific sports systems for sportsmen.

In this Manual, the innovative technologies will be introduced in detail for your better understanding of their functions and principles. As the saying goes, Sharp tools make good work; we will provide you with the best sports products in line with the technical trends.

TECHNOLOGY DISTRIBUTION

CORE TECHNOLOGIES

BASIC TECHNOLOGIES

TEMPERATURE AND HUMIDITY CONTROL SYSTEM

PROTECTIVE SYSTEMS

ECOLOGICAL ENVIRONMENT-FRIENDLY SYSTEM

TECHNOLOGIES FOR SHOE PRODUCTS

PART 1

CORE TECHNOLOGIES

TECHNOLOGY DISTRIBUTION

TECHNOLOGY STRUCTURE

TECHNOLOGY DISTRIBUTION

Developed based on the experience of sportsmen, PEAK sports technologies try to bring a perfect experience of comfort and sports to consumers. They are distributed on the surfaces, insoles, and outsoles of sports shoes and their different combinations give products unique sports technology systems.

UPPER

- SUPPORTING / WRAPPING / BREATHABLE
- Innovative materials and redesigned special structures make sports shoes comfortable and protective and give an excellent wearing experience.

INSOLE

- SHOCK / ABSORBING / LIGHT
- Our sports shoes employ multiple materials and processes and artful structures in line with their special needs to prevent sportsmen from receiving athletic injuries.

OUTSOLE

- STABLE / ANTI–SLIP / WEAR–RESISTANT
- We provide customized wear resistance and ground gripping for sports shoes to meet different sports needs and keep sports smooth and safe.

TECHNOLOGY STRUCTURE

	UPPER	INSOLE	OUTSOLE
SHOCK ABSORBING AND REBOUNDING		*GRADIENT dual CUSHION-3 PEAK R-PAD PEAK S-PAD P-MOTIVE MULTI-CORE*	
SUPPORTING AND WRAPPING	*GRADIENT shell 270 DYNAMIC TONGUE P-SUIT TIE UP PEAK SURFACE*	*TENACITY UNIT PEAK STA*	
FLEXIBLE AND LIGHT		*EASY FLEX*	*LIGHT RB PEAK REVOLVE PEAK ULTRA GRIP*
DURABLE	*P-ARMOR*		*PEAK OUTDOOR RB*
FLEPERATUER REGULATING	*P-WARM COOLFREE*		
TECHNOLOGY PLATFORM	*GRADIENT TECH*	*GRADIENT TECH I-SOLE*	

CORE TECHNOLOGIES

- GRADIENT SHELL
- GRADIENT DUAL
- CUSHION–3

GRADIENT shell

Application of the gradient concept on the surfaces of sports shoes: Support for the surface is a precondition for high-intensity motions of the feet such as sudden stops and direction changes. Based on studies of the law of interaction between your feet and surfaces during sports, along with parameterized design, we distribute the surface support materials onto the surface in a gradated way, and strengthen the support for key positions of the surfaces by changing densities and shapes of the surface support materials, in a bid to keep stable surface structures in high-intensity motions and provide accurate support for your feet.

- *GRADIENT shell*
- **Core technologies for the surface**
- **Gradient concept / Support / Stable**

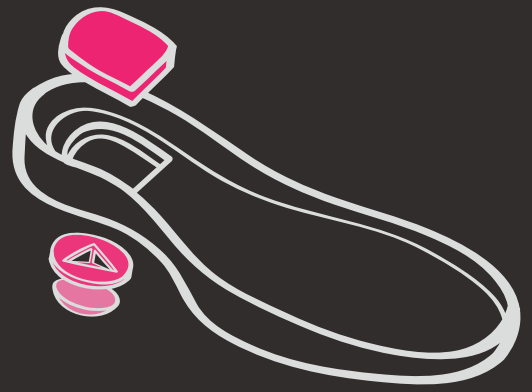
GRADIENT dual

The gradient dual technologies include the PEAK R-pad and PEAK S-pad. Two rebounding modules with different densities are embedded in the front sole position of the outsole according to the pressure distribution law of the front sole to realize quicker starts and higher bounce; two shock-absorbing modules with different densities are embedded in the rear sole position of the outsole according to the pressure distribution law of the rear sole to realize a more comfortable and less shocking landing. The four modules help the stresses on the feet fit the motion demands better and support foot motion perfectly.

- *GRADIENT dual*
- **Core technologies for the insole**
- **Gradient concept / Shock absorbing**

CUSHION-3

Three materials, including the EVA shock-absorbing material in the middle heel, the ESS (energy storage system) material below the EVA shock-absorbing material, and the TPU window in the outsole, are used for shock absorption stage by stage. During landing, the impact force on the heel is absorbed and stored by the EVA shock-absorbing material and the ESS material by means of deformation; the enclosed air pressure space and the ESS material at the bottom resumes from the deformation to the original state quickly to realize force feedback in the vertical direction. All of these materials improve shock absorption and support by the insole.



- *CUSHION-3*
- **Core technologies for the insole**
- **Stage–by–stage shock absorbing /Supporting**

BASIC TECHNOLOGIES

- BASIC TECHNOLOGIES FOR THE SURFACE
- BASIC TECHNOLOGIES FOR THE INSOLE
- BASIC TECHNOLOGIES FOR THE OUTSOLE

BASIC TECHNOLOGIES FOR THE SURFACE

- INNOVATIVE SURFACE
- P–SUIT
- TIE UP
- P–ARMOR
- 270 DYNAMIC TONGUE
- COOL FREE
- P–WARM

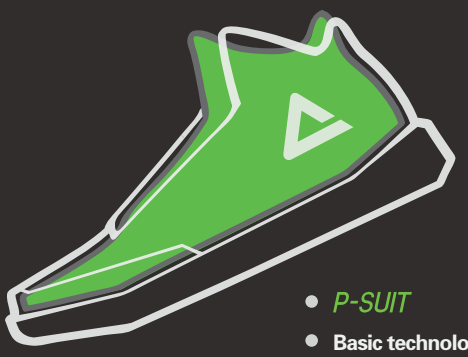
PEAK SURFACE

The surfaces are strengthened through bionic design and special materials and processes, and become elastic and tough, so they provide good wrapping and dynamic support and decrease the discomfort of the feet that are in contact with them during high–intensity motion, providing an excellent wearing experience for feet.

- *PEAK SURFACE*
- **Basic technologies for the surface**
- **Supporting / Wrapping**

P-SUIT

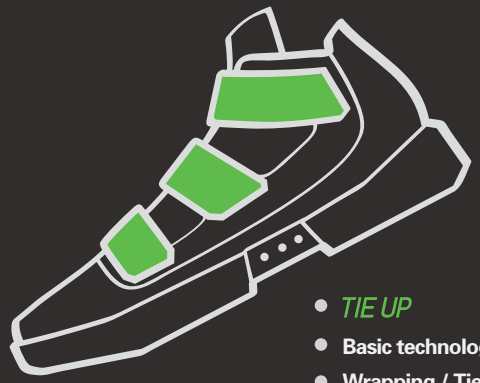
During high–intensity motion, the P–suit below the surface can grip the foot, and reduce its relative slip in the shoe, thus making the surface, the insole, and the foot completely synchronous, and improving support and wrapping of the shoe for the foot and the wearing comfort.



- *P-SUIT*
- **Basic technologies for the surface**
- **Wrapping / Comfortable**

TIE UP

It is a design making the surfaces fit the feet better and improving the wrapping. Methods such as velcro tapes and upper tie up structures make the shoes fit the feet closely, and improve wrapping of the shoes to bring a feeling of complete integration of the shoes and the feet.



- *TIE UP*
- **Basic technologies for the surface**
- **Wrapping / Tie up**

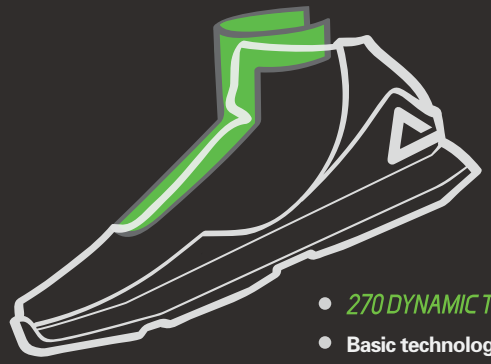
P-ARMOR

It is a special technology for wear resistance of the uppers of tennis shoes. The surface areas in high contact with ground use wear–resistant materials or structures to avoid surface damage, increase friction between the surfaces and ground during contact, and protect the toes.

- *P-ARMOR*
- **Basic technologies for the surface**
- **Wear–resistant / Protective**

270 DYNAMIC TONGUE

Compared with conventional tongues, the 270° dynamic tongue, employing a technology integrating comfort and protection, can wrap ankle joints better because of a larger wrapping area, thus improving the wearing comfort and protecting ankle joints during sports.



- 270 DYNAMIC TONGUE
- **Basic technologies for the surface**
- **Wrapping / Protective**

COOLFREE

The breathable material and the breathability design improve air circulation between interiors and exteriors of sport shoes to effectively lower the temperatures in sport shoes, reduce the feeling of stuffiness in shoes, and keep feet dry and breathable.

- COOLFREE
- **Basic technologies for the surface**
- **Breathable / Comfortable**

P-WARM

The shoes for winter use and outdoor use employ thermal insulation materials to prevent cold air from their interiors and reduce the heat loss of feet to keep you warm in cold weather.

BASIC TECHNOLOGIES FOR THE INSOLE

- P–MOTIVE
- MULTI–CORE
- PEAK R–PAD
- PEAK S–PAD
- TENACITY UNIT
- PEAK STA
- EASY FLEX
- I–SOLE

P-MOTIVE

The high rebounding material based on a new formula and foaming technology is softer and lighter than relevant conventional materials, and has a rebounding ratio above 45%, making sports more comfortable. Furthermore, thanks to the special formula, the high rebounding material has great durability because it can still be elastic after longterm compression.

- *P-MOTIVE*
- **Basic technologies for the insole**
- **Wrapping / Protective**

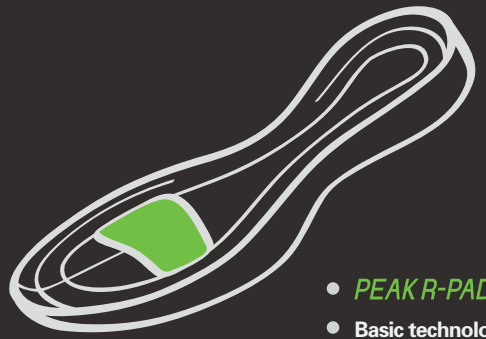
MULTI-CORE

Each outsole is designed with multiple hollow structures to reduce its weight and realize a buffering effect by means of structural deformation. Thanks to excellent rebounding of its rubber–plastic material, the outsole is free to switch between buffering and rebounding.

- *MULTI-CORE*
- **Basic technologies for the insole**
- **Breathable / Comfortable**

PEAK R-PAD

The high rebounding material module for the front insoles has an elasticity 25% higher than that of a common insole material. It can feed back energy quickly after compression and deformation to realize excellent rebounding for the start motion of the front soles and improve the sport performance of sportsmen.



- *PEAK R-PAD*
- **Basic technologies for the insole**
- **Energy storing / Rebounding**

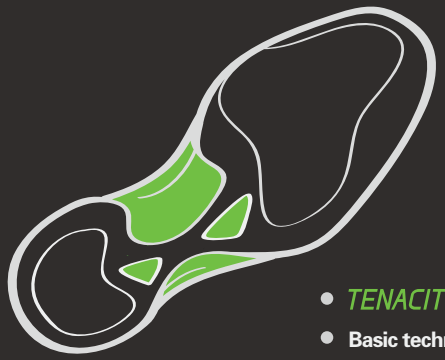
PEAK S-PAD

The shock–absorbing material module for the rear insoles can absorb the landing impacts of rear soles and decentralize the impact pressures effectively to realize excellent buffering for sports shoes to reduce athletic injuries.

- *PEAK S-PAD*
- **Basic technologies for the insole**
- **Shock absorbing / Protective**

TENACITY UNIT

The high-strength tenacity units in the foot arch positions in the outsoles keep the outsole shapes stable during high-intensity motion, improve the tenacity of outsoles, and keep feet in a reasonable range of motion, thus supporting feet well and avoiding athletic injuries.



- *TENACITY UNIT*
- **Basic technologies for the insole**
- **Force transferring / Stable**

PEAK STA

It is a protective technology used on basketball shoes, tennis shoes, and other sports shoes with more lateral motion for the sake of better stability. Outward upturning and rising of the front outsoles supports feet during lateral motion to reduce foot injuries during high-intensity motion.

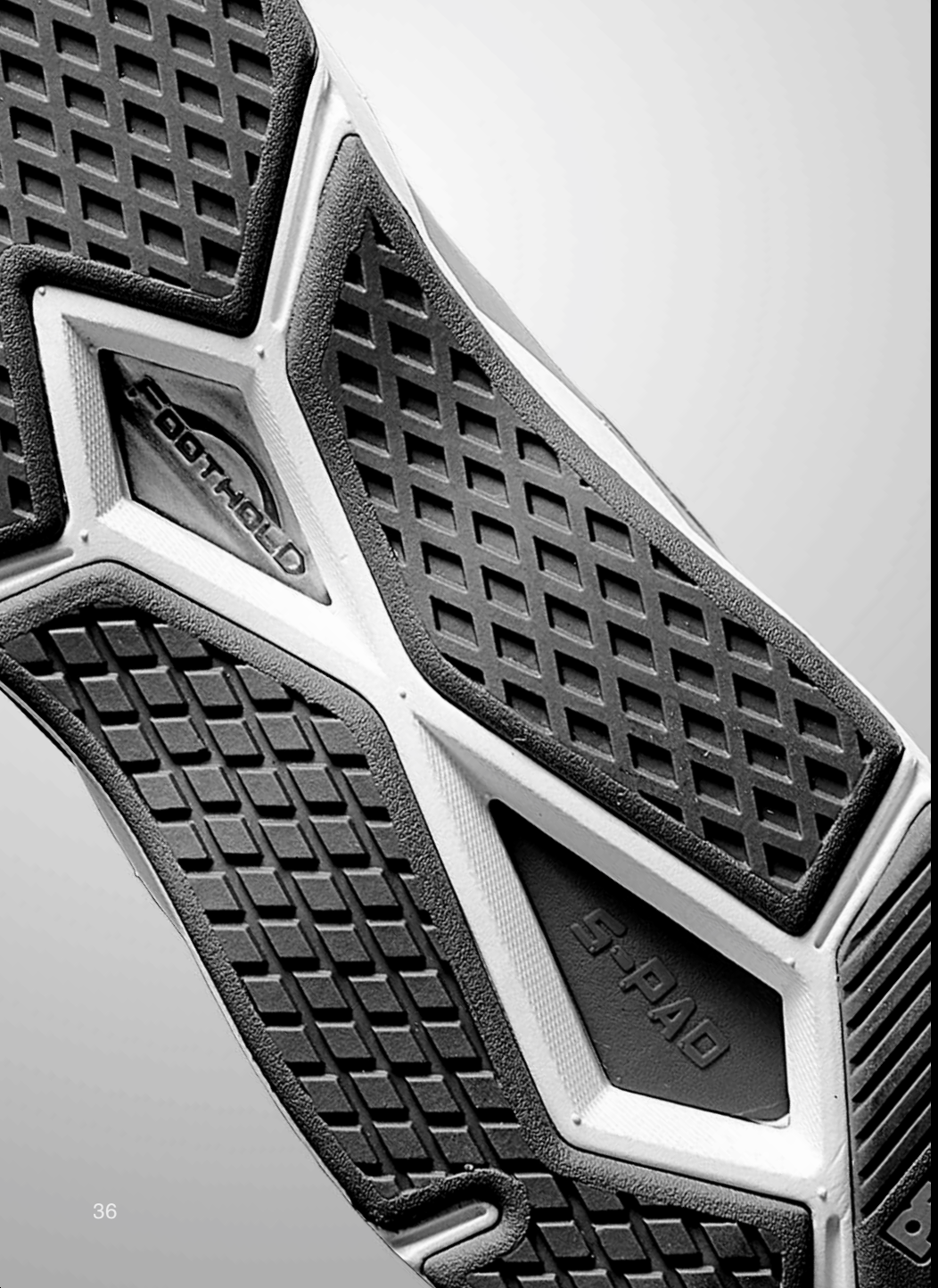
- *PEAK STA*
- **Basic technologies for the insole**
- **Stable / Lateral supporting**

EASY FLEX

By means of formula upgrading, the rubber used has greatly improved wear resistance and can therefore adapt to plastic or cement outdoor grounds well to avoid a short life for your sports shoes because of quick outsole wear.

I-SOLE

The weight of sports shoes is mainly composed of their outsole rubber. By means of upgrading of the rubber formula and application of foaming technology, we have reduced the weight of the outsole rubber greatly, thus decreasing the loads on your feet during sports.

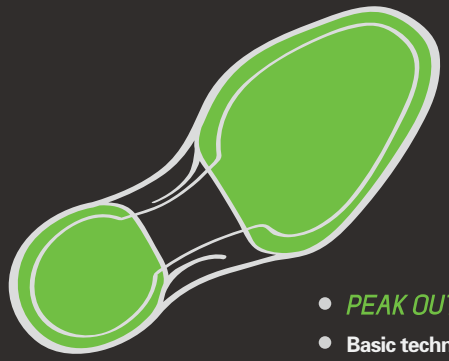


BASIC TECHNOLOGIES FOR THE OUTSOLE

- PEAK OUTDOOR RB
- LIGHT RB
- PEAK REVOLVE
- PEAK ULTRA–GRIP

PEAK OUTDOOR RB

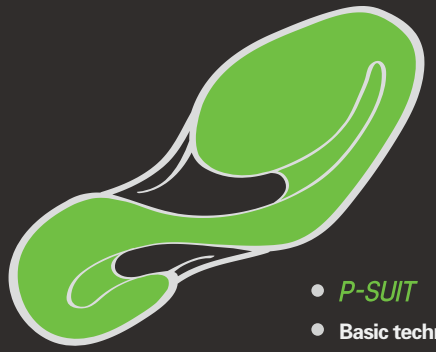
By means of formula upgrading, the rubber used has greatly improved wear resistance and can therefore adapt to plastic or cement outdoor grounds well to avoid a short life for your sports shoes because of quick outsole wear.



- *PEAK OUTDOOR RB*
- **Basic technologies for the outsole**
- **Durable / Ground gripping**

LIGHT RB

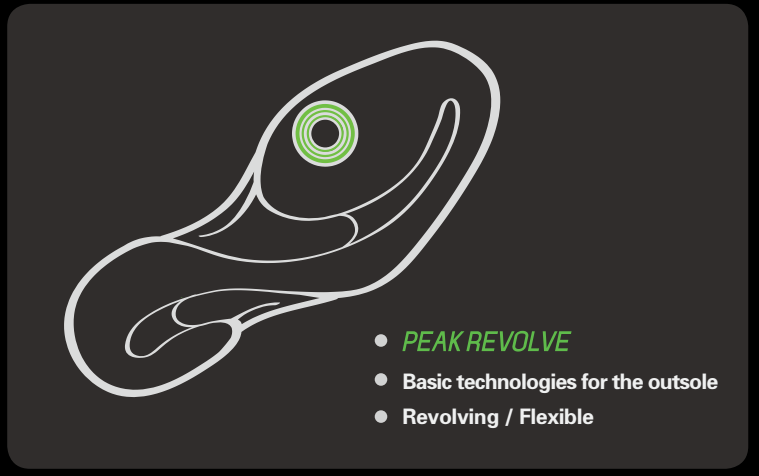
The weight of sports shoes is mainly composed of their outsole rubber. By means of upgrading of the rubber formula and application of foaming technology, we have reduced the weight of the outsole rubber greatly, thus decreasing the loads on your feet during sports.



- *P-SUIT*
- **Basic technologies for the outsole**
- **Light / Durable**

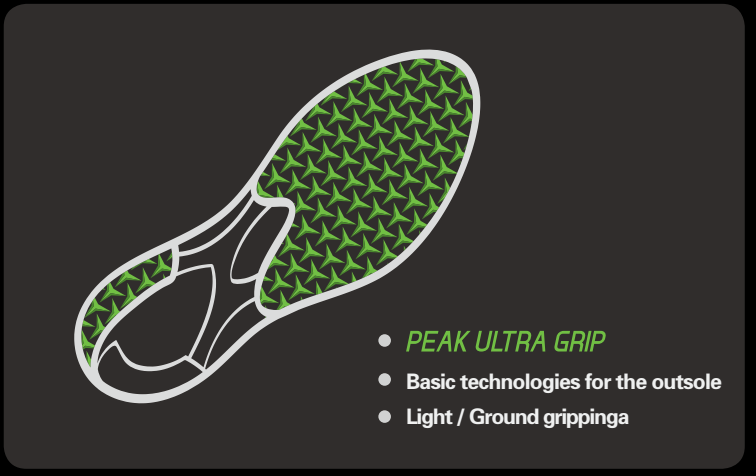
PEAK REVOLVE

The round revolving button in the inner side of a front outsole supports the revolving of the front sole on ground to reduce confrontation between the outsole and the ground during motions such as direction changes, turning around, and rotation to make the motions smoother.



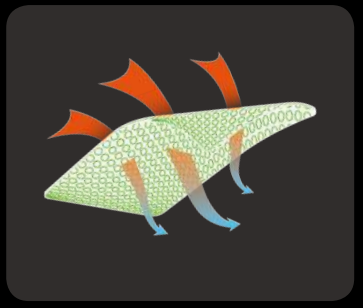
PEAK ULTRA GRIP

The common outsole rubber on front outsoles is replaced by a 3D KPU injection material. The special KPU formula guarantees excellent anti-slip performance and ground gripping performance even on wet ground and reduces outsole weight greatly. Thus, it is the best choice for marathon races.



TECHNOLOGIES FOR CLOTHING PRODUCTS

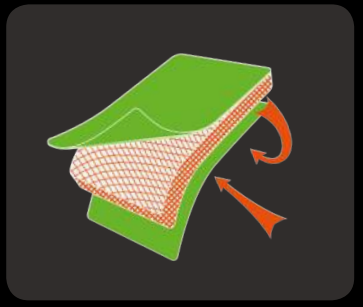
PART 2



P-ICE

ICE-SENSE TECHNOLOGY

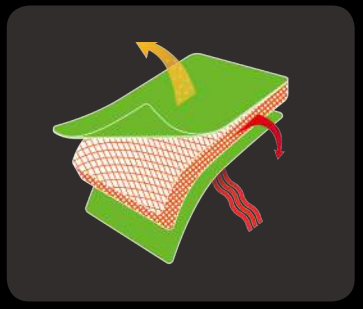
With fabrics made of sub-micron cool mineral powder with slow heat absorption and quick heat dissipation, the garments have a great cooling effect and bring an overall ice-cool feeling for skin in hot weather.



P-WARM

ENERGY FLANNELETTE

Compared with another thermal insulation material of the same weight, the energy flannelette used can realize heat energy storage and heat loss reduction for human bodies effectively.



FELLEX

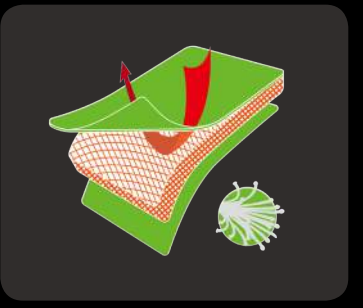
FELLEX EFFICIENT THERMAL INSULATION COTTON

FELLEX thermal insulation cotton adopts 'multi-layer fiber structure' technology. The 'air chambers' between the fiber layers can prevent heat loss from human bodies through the exterior of garments. Garments made of this material are breathable and light.

THERMOLITE®

THERMOLITE THERMAL INSULATION MATERIAL

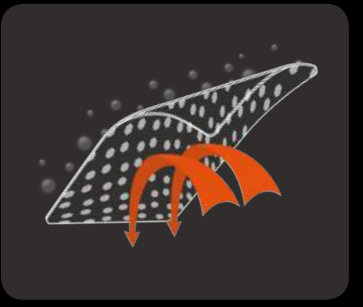
THERMOLITE fiber is a special hollow fiber. Each piece of the fiber is provided with a micro air bag to form an air protective layer to keep away cold air and discharge moisture to keep human bodies warm, dry, comfortable, and relaxed.



P-REFLECTOR

REFLECTIVE INSULATING

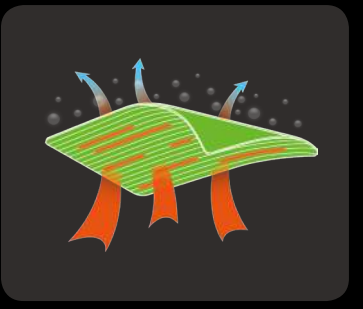
The fabric linings can reflect and store the heat generated by human bodies to minimize the heat loss of human bodies in cold weather. Additionally, the fabric linings are breathable, so garments with them feel less stuffy.



P-DRY

QUICK DRYING

The evaporation areas of fabrics are increased to make the sweat and moisture on fabrics diffuse quickly and then evaporated by means of air circulation to realize quick drying and keep human bodies dry and comfortable.



P-CAPILLAR

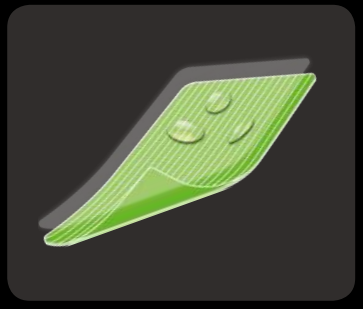
UNIDIRECTIONAL MOISTURE TRANSFER

Make use of the capillarity of the tiny grooves on the fiber surfaces to drain sweat on the skin away from the fabric interior to the fabric exterior quickly to keep the space between the fabric and the skin dry.

P-THERMOSTATIC

THERMOSTATIC TECHNOLOGY

Special fiber texture on the fabric exterior keeps away cold air while the fabric interior avoids heat loss of the human body to keep a constant temperature in cold weather. Furthermore, it can keep the human body comfortable because it is breathable.



P-EASYCARE

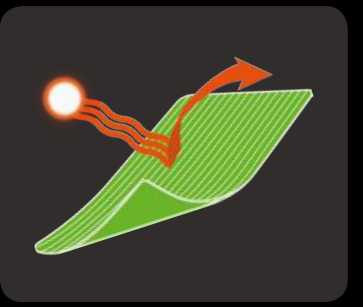
THREE-PROOFING FABRIC

Based on processing with fluorine polymer, the fabric is highly resistant to water, oil, and stains, and softer and more comfortable, keeping human bodies from water, oil and stains and guaranteeing comfortable wear.

P-UV

UV RESISTANCE

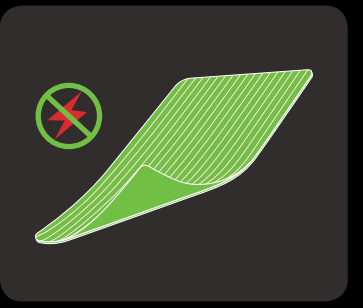
The fabric can reflect and shield UV light and effectively absorb the UV light going through it to avoid skin damage by excessive UV light. Even after several washes, its UV-resistant effect are still good.



P-ANTISTATIC

STATIC RESISTANCE

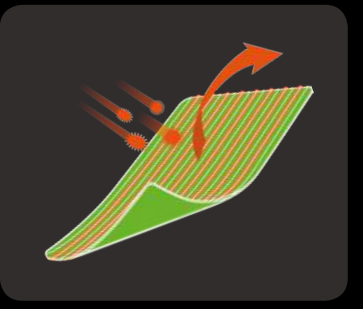
The fabric's special anti-static coating after anti-static processing can reduce the static on the fabric effectively to keep human bodies from static interference.

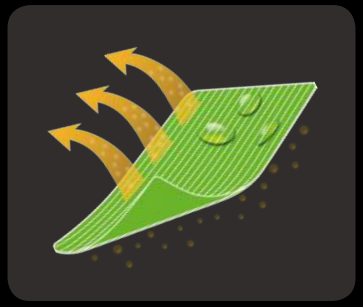


P-HEALTH

BACTERIA RESISTANCE AND DEODORIZATION

Such absorptive ion components as antibacterial and anti-fungal ions or activated carbon are added into textiles to prevent microorganisms from degrading fibers and being absorbed on them to avoid skin damage by pathogenic microorganisms.

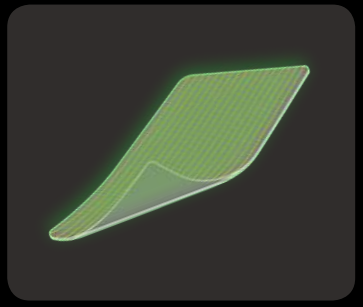




P-WATERPROOF

WATER PROOFING AND WATER VAPOR PERMEABILITY

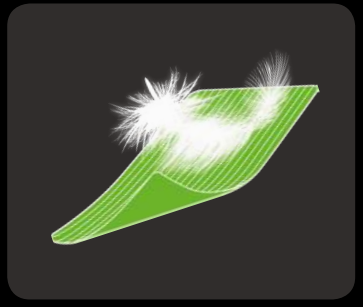
The fabric structure or the coating is improved to keep external moisture from the fabric interior and drain sweat to the fabric exterior to make sure garments are waterproof and breathable in extreme outdoor conditions.



P-LUMIA

LUMINOUS TECHNOLOGY

The luminous fabric can give off fluorescence in darkness to make garments more visible at night to improve the visual effects of garments and make motion at night safe.



P-LIGHT

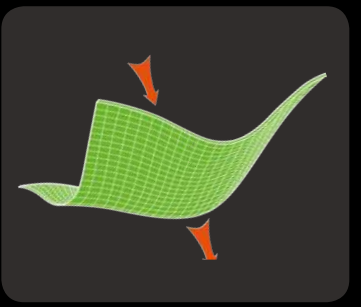
ULTRA-LIGHT FABRIC

Compared with common fabrics, the ultra–light fabric with a sufficient strength has thinner yarns and a smaller weight, thus reducing the load during motion and improving the wearing comfort.

P-COMPRESSION

ELASTIC FABRIC

Thanks to the elastic material in it, the fabric can be stretched easily and, after restoring to its original state, fit the human body closely.



P-FLAT

SEAMLESSNESS

The fabric seams are removed through a special production process. The seamless splicing technology for fabrics makes garments feel comfortable to avoid discomfort because of repeated friction between the fabric seams and the skin during long–term sports activities.

P-GREEN

ENVIRONMENT-FRIENDLY FABRIC

The fabric fiber integrates the advantages of synthetic fiber and natural fiber and can realize completely natural circulation and biological decomposition. Thus, the fabric is an environment–friendly and ecological one.


PEAK