# PONNON

# WEAVING THE FUTURE

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# POLYUNI

WEAVING THE FUTURE

Polyunion Industrial Limited is a China-based global manufacturer of high-quality webbing with a range from recycled yarn to heavy industrial webbing.





With over 40 years of experience dedicated to the development and production of webbing, Polyunion has set up production facilities in Taiwan, Shenzhen, Vietnam and Dongguan, as well as business offices in China and France. Polyunion is able to meet and exceed the various needs of customers and comply with in-house quality controls and international testing standards. The sites and the products are certified with ISO-9001: 2015, Bluesign and GRS etc.

Adhering to the philosophy of "quality and innovation", Polyunion has obtained patents for product design and technology in many fields. The company is capable of developing and producing recycled yarn, jacquard webbing, elastic webbing, cords and other kinds of webbing and assembling finished sewn products according to customers' requirements, providing one-stop service and customized product solutions from raw materials to finished products.

YARN | WEBBING | SEWING PRODUCTS



# QUALITY ASSURANCE

Quality is at the heart of our concerns. Polyunion has set up strict quality control and management standards. Starting from the raw materials, we comply with all inspection processes. The company not only has an experienced production and quality management team but also is equipped with professional equipment to efficiently complete a series of quality tests within the company.

Polyunion offers specialised high-performance specification products for use in different applications. Each product is designed exactly to the relevant specifications. Webbings must comply with the latest international standards and specifications while providing confidence to the user, especially under extreme and challenging conditions.

# ENVIRONMENTAL PROTECTION

Polyunion is committed to reduce the impact of the company's operations on the environment. The goal is to comply with all statutory and regulatory requirements during the manufacturing process, and promote sustainability and environmental awareness at all levels of the company.

Polyunion's conformity to international and national standards is confirmed through our many certifications. Currently, our production locations have been certified as meeting ISO 9001 : 2015, Bluesign system, Global Recycle Standard (GRS) and OEKO-TEX STANDARD 100.









# **POLYUNI**®N

# IN HOUSE TEST EQUIPMENT

- UNIVERSAL TENSILE TESTERS
- YARN STRENGTH TESTER
- MARTINDALE ABRASION TESTER
- PERSPIRATION TESTER
- UV ACCELERATED WEATHERING TESTER
- SHOE LACE ABRASION TESTER
- YARN TWIST TESTER
- ROCKWELL HARDNESS TESTING MACHINE
- CONSTANT TEMPERATURE & HUMIDITY TESTING CHAMBER
- STANDARD LAUNDER TESTER
- SPRAY RATING TESTER (FOR TEXTILE)
- SPECTROPHOTOMETER
- WRAP REEL
- OPTICAL IMAGE MEASURING INSTRUMENT
- SPECTRAL CALIBRATION LAMP













# **POST-TREATMENT PROCESS**

# PACKAGING PROCESSING

### SUBLIMATIN PRINTING

Sublimation printing makes the effects permanent, full-color images that won't crack, peel or wash away from the substrate, as the ink is embedded in the fabric or substrate rather than simply laying on top.

## CUTTING

Cutting the finished webbing at high temperature to the required length for packaging, and making the edge of the cut edge smooth.

### **HEAT-SETTING**

Maintenance of good dimensional stability by heating (resistance to elongation and shrinkage). A important step for webbing made partly of thermoplastic materials (polyester, nylon...) which must be used at fixed lengths.

# FUNCTIONAL POST-PROCESSING



WATERPROOF WATER REPELLENT



FLAME RETARDANCY HIGH TEMPERATURE RESISTANT



Anti-Bacterial Anti-Virus



ANTI-STATIC





WEAVING THE FUTURE

# WEAVING THE FUTURE INDUSTRIA WEBBING

POLYUNIÓN INDUSTRIAL LIMITEI

Polyunion offers high-performance webbing for diverse industrial sectors, including construction, transportation and aerial work etc. The demands on industrial gear and equipment push the performance and reliability of webbing products to the limit. Manufactured from high-quality yarn (Polypropylene, Polyester, Polyamid..) to special yarn (Dyneema, Technora, Kevlar...), with superior manufacturing processes and high-performance design, industrial webbings are supplied in various configurations to achieve different customer requirements, being both durable and tenacious.

Depending on the specific application, the webbing can be post-treated (including waterproof, anti-static, flame retardant, etc.). All of our products are in full compliance with the relevant specifications, mandatory regulations and end-user requirements.

## ACCREDITATIONS

Polyunion's conformity to international and national standards is confirmed through our many certifications. Currently, our production locations have been certified as meeting ISO 9001 : 2015, Bluesign system, Global Recycle Standard (GRS) and OEKO-TEX STANDARD 100.











**Product description**: Lashing webbing is often used with hooks to secure goods of extremely heavy weights or even vehicles for transport.

Application: Transport / Cargo securement



**Specifics and advantages:** Our products are manufactured from ultra-high tenacity polyester yarns, utilizing compact weave patterns to provide superior strengths, while remaining durable and versatile. The specifics like low elongation, high abrasion resistance and UV resistance which minimize the risk of loosening of the lashing strap from the load.



**Product description:** Helmet webbing is slimmer but tougher to provide users with security and comfort while wearing the helmet.

**Application:** Working at height / Construction sector / Extractive Industry



**Specifics and advantages:** Helmet webbing can be made of PP, nylon and other materials, soft touch to make the end user feel comfortable when wearing the helmet. By weaving in a compact pattern, the helmet buckle will not easily slip off during movement



# SAFETY HARNESS WEBBING



**Product description:** Safety harness webbing can be used for all types of safety gear to provide personal protection in dangerous situations such as working at height to prevent a fall.

**Application:** Working at height / Construction sector

**Specifics and advantages:** Safety webbing can be made of ultra-high tenacity polyester yarn or special material (UHMwPE...), with a compact weave, it can provide superior toughness and high abrasion resistance while maintaining a durable, soft-touch, and flexible use to ensure freedom of movement and comfort for the end user.



**Product description:** Tear webbing plays a role in controlling, deceleration and cushioning the high impact pressure that occurs during the fall, thus minimizing injuries.

**Application:** Working at height / Fire-fighting equipment / Construction sector

**Specifics and advantages:** Tear webbing consists of two webbing strips interwoven along its length to create a cushioned area. Maximum energy absorption is achieved through its design, ultra-high tenacity yarns (UHMwPE...) and superior strength capacity to ensure no bounce-back effect. A In-house drop test tower is available to make sure that the product meets all standards.



# LIFTING & RECOVERY WEBBING

**Product description:** Lifting & recovery webbing is designed for light to heavy duty industrial lifting applications.

**Application:** Vehicle towing / Lifting slings for beams

**Specifics and advantages:** Manufactured from industrial high tenacity polyester, heavy and tubular webbings according to international standards. High abrasion, chemical and UV resistance and low absorption make it possible to replace traditional steel wires, ropes and chains, making them more flexible and easy to use.



**Product description:** The TPU coated webbing is coated with TPU on a general webbing, such as nylon or polyester webbing. TPU coated webbing is a very good example of environmental protection and its performance. We manufacture matte TPU coated webbing, glossy TPU coated webbing and reflective TPU coated webbing.

Application: luggage / handbag / belt

**Specifics and advantages:** TPU coated webbing product has high resistance against oils, greases, and oxygen, easy to clean. It has also a good low-temperature flexibility and anti-slip. The flame-retardant polyether TPU coated webbing meets the corresponding fireproof levels. It has high temperature resistance and can be used in the highest temperature range of 80 degrees.



**Product description:** Unlike traditional handles, our handle webbing are produced integrally as they are manufactured with the padding (ex. stretch nylon) woven in.

Application: Any kind of handles

**Specifics and advantages:** With nylon yarn, our one-stop production handles are soft, comfortable to the touch and more resistant. Depending on the application of the handle, the length, thickness and material of the handle can be optimally adapted and post-treated.

## PROTECTIVE TUBULAR WEBBING



**Product description:** Protective tubular webbing is specifically designed for hose protection, adapted for any application that requires durable, reliable high-performing hose protection.

**Application:** Industrial hose and wire protection / Automotive industry / Mining



**Specifics and advantages:** Protective tubular webbings are made of high-quality polyester or nylon and are therefore provide the best strength, impact resistance and abrasion characteristics, prevent severe injury and protect equipment from costly damage.



**Product description:** Seat belt webbing is to provide specific elongation within the webbing to ensure stretch at a controlled rate, absorbing and dissipating collision energy and reducing the severity of an occupant's deceleration.

**Application:** Automotive / Aeronautical restraints / Seat belts

# SEAT BELT WEBBING



**Specifics and advantages:** Made from application-specific high tenacity polyester, the seat belt webbing has a tensile strength sufficient to support heavy weight. The characteristics include the width, thickness and tensile strength can be customised to suit any application.



**Product description:** Daisy chain is a vertical length of webbing with multiple loops that serve as attachment points for protective gear. Stitched to a backpack in one or two rows to increase the carrying capacity of the pack while making it more convenient for the user to access needed items. **Specifics and advantages:** The one-stop sewing saves time and costs and allows the webbing to be formed into one piece. The width, length, loop size and attachment points can be varied according to the application, giving it a stronger and beautiful appearance without sewing marks.

Application: Backpack / Hammock / safety gear



WEAVING THE FUTURE

# WEAVING THE FUTURE OUTDOOR WEBBING

POLYUNION INDUSTRIAL LIMITED

Polyunion has developed a variety of innovative webbing products for the outdoor and related industries. We offer high-performance webbing for diverse types of outdoor sports, including **mountaineering**, skiing, paragliding, and urban outdoor sports. The demands on outdoor gear and equipment push the performance and reliability of our webbing to the limit.

All of our products are in full compliance with the relevant specifications, mandatory regulations and end-user requirements. According to the customer needs, they can be waterproof, abrasion-resistant, anti-static etc. Manufactured from high-quality raw materials (polypropylene, polyester, nylon etc.), with superior manufacturing processes and high-performance design, outdoor webbings are supplied in various configurations and dyed colours to achieve different customer requirements, being both durable and lightweight.

Our mission is to provide our customers with high quality and reliable webbing and excellent customer service.

## ACCREDITATIONS

Polyunion's conformity to international and national standards is confirmed through our many certifications. Currently, our production locations have been certified as meeting ISO 9001 : 2015, Bluesign system, Global Recycle Standard (GRS) and OEKO-TEX STANDARD 100.











# BINDING TAPES



#### **PRODUCT DESCRIPTION:**

The Binding tape is finer in touch and appearance than industrial webbing, with all kinds of different patterns and colours to meet the different needs of customers.

#### **APPLICATION:**

Sportswear / bags / tents / outdoor furniture / yoga straps

#### **SPECIFICS AND ADVANTAGES:**

Using high-tenacity polyester, nylon or cotton yarns for weaving, soft for touch, and a wide variety of webbing patterns to choose from, the binding tape is very versatile across diverse applications of outdoor sports.



#### **PRODUCT DESCRIPTION:**

Helmet webbing is slimmer but tougher to provide users with security and comfort while wearing the helmet.

#### **APPLICATION:**

Mountaineering / skiing / cycling



#### **SPECIFICS AND ADVANTAGES:**

Helmet webbing can be made of PP, nylon and other materials according to customer needs, soft touch to make the user feel comfortable when wearing the helmet. At the same time, the use of a compact pattern with a helmet buckle makes it possible for the webbing not to slip easily during movement.



# SAFETY HARNESS WEBBING



#### **PRODUCT DESCRIPTION:**

Safety harness webbing can be used for all types of safety gear to to provide personal protection during sports or work at height or in hazardous situations where fall protection is required.

#### **APPLICATION:**

Mountaineering / parachuting / paragliding / bungee jumping

#### **SPECIFICS AND ADVANTAGES:**

The safety webbing is made of ultra-high tenacity polyester yarn and utilises a compact weave that provides superior toughness and high abrasion resistance while maintaining a durable, soft-touch, and flexible use to ensure freedom of movement and comfort for the user.

# TEAR WEBBING

#### **PRODUCT DESCRIPTION:**

The tear webbing uses its unique design of ultra-high-strength and excellent ductility to absorb the kinetic energy of the fall. It can play a role in controlling, deceleration and cushioning the high impact pressure that occurs during the fall, thus minimizing injuries.

#### **APPLICATION:**

Working at height / mountaineering

#### **SPECIFICS AND ADVANTAGES:**

The tear webbing consists of two webbing strips interwoven face-to-face along its length, creating a cushioned area. Maximum energy absorption is achieved through its unique design, ultra-high tenacity yarns and superior strength capacity provided by proprietary production technology, ensuring no bounce-back effect. A drop test tower is available within the company to make sure that the product meets all international safety standards.



# REFLECTIVE SHOELACE



#### **PRODUCT DESCRIPTION:**

Depending on the use of the sports shoe, the laces can be woven in a light and minimalist way or in a more design-oriented way.

#### **APPLICATION:**

Sports shoes / tent camping

#### **SPECIFICS AND ADVANTAGES:**

The characteristic of reflective yarn makes users more secure when running at night. The texture of the laces is soft, but the use of high-tenacity nylon can make it more abrasion-resistant. At the same time, the weaving methods can make the laces tighter and less likely to undone during exercise.

# BACKPACK WEBBING



#### **PRODUCT DESCRIPTION:**

Backpack webbing can be used in a wide range of applications, with different colours, webbing patterns and materials according to customer needs, for all kinds of backpack products and related products.

#### **APPLICATION:**

Outdoor backpack / urban backpack / safety gear / belt / hiking poles strap / ski strap



#### **SPECIFICS AND ADVANTAGES:**

Different materials are available for various types of backpack products, including PP, nylon, polyester and even high-strength polyester, allowing the backpack webbing to meet the tensile strength requirements and abrasion resistance of each type, while offering the benefits of low ductility and low shrinkage to meet the specifications required for outdoor products.



# YOGA ELASTIC BAND

#### **PRODUCT DESCRIPTION:**

Yoga elastic band are made of soft elastic, which can also be made in different materials, patterns and widths according to the customer's product needs.

#### **APPLICATION:**

Yoga products / apparel / protection gear / bags

#### **SPECIFICS AND ADVANTAGES:**

The yoga elastic band can be woven with Lycra nylon yarn, which is softer and more delicate to the touch and has high ductility. At the same time, different printing methods can be used according to the needs of the brand to make the yoga belt pattern more vivid.

# OUTDOOR ELASTIC WEBBING



# <image>

#### **PRODUCT DESCRIPTION:**

The webbing has excellent high elasticity to maximize cushioning force and reduce recoil when the webbing is stretched during use.

**APPLICATION:** 

#### Safety gear

#### SPECIFICS AND ADVANTAGES:

The use of high-quality nylon or polyester material for weaving, with the manufacturing process of multiple folding, features the high elasticity and excellent memory which are required to achieve the cushioning effect and not get stretched out over time.



#### **PRODUCT DESCRIPTION:**

Abrasion-resistant sling is often used for outdoor sports, made with lengths of webbing that are sewn or knotted into a closed-loop, and is used to create a hauling station for a potential belay from above.

## ABRASION-RESISTANT SLING



#### **SPECIFICS AND ADVANTAGES:**

The sling can be made of ultra-high tenacity yarn, and utilize a compact weave pattern and high belt thickness to achieve low elongation and shrinkage as well as low water absorption, greatly improving the toughness and abrasion resistance of the belts.

#### **APPLICATION:**

Climbing quickdraw / climbing harness



#### **PRODUCT DESCRIPTION:**

Daisy chain is a vertical length of webbing with multiple loops, they can be opened up and down, or left and right. The width, loop size, connection point and length of the webbing can be adjusted.

#### **APPLICATION:**

Backpack / hammock, mountaineering safety gear / camping products

#### **SPECIFICS AND ADVANTAGES:**

Daisy chain is normally stitched to a backpack in one or two rows to increase the carrying capacity of the pack, while making it more convenient for the hiker to access needed items. The reduction of the sewing process saves time and cost, also allows the webbing to be formed as one piece, and provides a more solid feature and a beautiful appearance without sewing marks, and facilitating the hanging of buckles and accessories.



# POLYUNION

WEAVING THE FUTURE

# CONTACT US

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