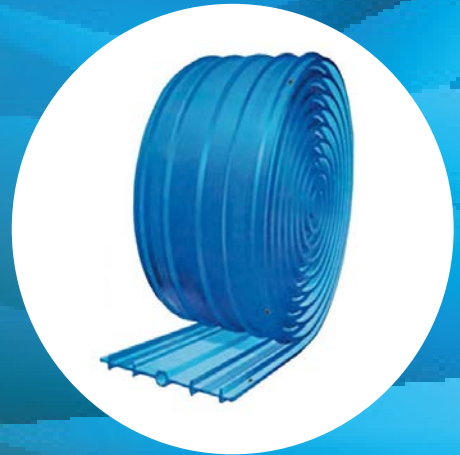
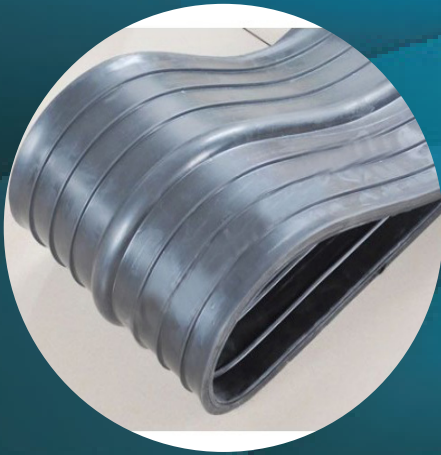




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## **Water-stop and waterproof materials**

- ◆ Rubber waterstop
- ◆ PVC waterstop
- ◆ Hydrophilic expansion waterstop strip
- ◆ Waterproof sheet

**Hengshui Jingtong Rubber Co., Ltd.**

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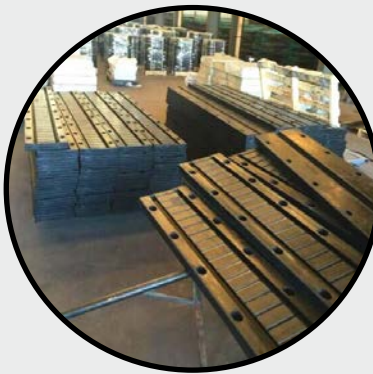
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## **Hydrophilic Expansion Water-stop Strip Waterproof Sheet**



# JINGTONG



## The Leading Supplier of Quality Waterstops

Hengshui Jingtong Rubber Co., Ltd. located in Hengshui city, Hebei province, where very close to TianJin city and Beijing city, that specializes in manufacturing and exporting waterstop and waterproof materials since the establishment in 2007.




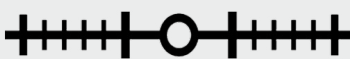






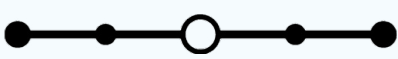

Adhering to the principle that quality determines the success and failures, our company pays much more attention to quality managements and today we are one of the leading companies owning customers in many countries of the world, such as Malaysia, Kenya, Uganda, USA.

To meet different needs of our customer, our company can supply varies types of products. At the same time, the products also can be customized to suit your specific scheme, even with complex profiles and different materials. So if you want to make a custom order, don't forget to provide us with your design drawing, sizes and standards. We will do it with all our power to satisfy your requirements.

Our products have passed ISO and GB inspection, thus, you can choose our products without any anxiety. In addition, we can also provide the third party reports with more than 3000 projects in domestic.

## Water-stop & Waterproof Materials

Water-stop and waterproof products include: rubber water-stop, hydrophilic expansion rubber water-stop, steel edge water-stop, PVC water-stop, HDPE water-stop, Bentonite water-stop strip, etc. The products comply with: KEJJI [2008] No.21 document & GB1817 3.2 - 2000 Polymer waterproof materials-Part 2: water-stop.

Model	Section shape	Model	Section shape
651 type 280-(7-12) 290-(8-12) 300-(8-15) 310-(8-15) 350-(8-12) 400-(10-20) 450-(10-20) 500-(10-20)		657 type 250-(10-15) 280-(10-20) 300-(10-20) 350-(10-20) 400-(10-20)	
652 type 280-(7-14) 300-(8-15) 310-(10-15) 350-(10-20) 400-(10-20) 450-(10-20)		322 type 322-6	
653 type 230-(6-10) 280-(6-10) 300-(10-15)		659 type 290-(10-15) 300-(12-15) 350-(12-20) 400-(12-200)	
654 type 350-(8-20) 400-(10-20) 450-(10-20)		660 type 300-(6-10) 350-(10-15) 400-(12-20) 450-(12-20) 500-(12-20)	
655 type 290-(10-14) 300-(10-15) 320-(10-18) 350-(10-20) 400-(10-20) 450-(10-20)		661 type 350-(10-18) 400-(12-20) 450-(12-20) 500-(12-20)	
656 type 295-(15-18) 300-(15-20) 400-(15-20)		662 type 350-(8-12) 400-(10-15) 450-(12-20) 500-(12-20)	

# Rubber Water-stop

## ◆ Rubber sealing strip classification

Based on usage, rubber sealing strip can be classified as buried water-stop and back stick type rubber water-stop. According to the form appearance, it can be divided into CB-type water stop (refers to the middle hole of buried water-stop), CP-type water stop (refers to the middle of nonporous buried water stop), EP-type water stop (also known as externally bonded water stop or backing with water stop, refers water stop to posted outside the middle of no pass water stop), EB-type water stop (also known as posted outside water stop or backing with water stop, refers to water stop posted outside the middle of the hole).





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## ◆ Rubber sealing strip model specification

Rubber sealing strip common specifications are 300 × 6 mm, 300 × 8 mm, 300 × 10 mm, 350 × 8 mm, 400 × 10 mm, etc. And the model commonly used is buried type 651.

Item	Section shape	Specification
E2-8		350 × 35 × 10
E2-9A		350 × 28 × 8
E2-9B		270 × 28 × 8
E2-10A		350 × 10
E2-10B		250 × 6
E2-11A		300 × 30 × 6
E2-11B		250 × 25 × 6
E2-12		300 × 40 × 8
E2-13		350 × 10 × 10
E2-14		350 × 10

## ◆ Rubber water-stop selection

Structures should be based on the level of importance, the amount of deformation and pressure, so that the water-stop can be used properly.

- Under normal circumstances, we generally advise you to choose the natural rubber water-stop.
- When it comes to weak acid and alkali corrosive media, you should use neoprene rubber water-stop.
- When it comes to oil medium, you should use nitrile rubber water-stop.
- When the application might be eroded by mold, water stop mildew should be considered. And at this time, the water-stop you choose should reaches level 2 and 2 above.
- According to the piratical using temperature.
  - 25 °C - 60 °C, it is better to choose chloroprene rubber water stop.
  - 35 °C - 60 °C, it is better to choose natural rubber water stop.
  - 40 °C - 60 °C, it is better to choose EPDM rubber water stop.
- When it comes to waterproof sheet materials such as welding, you should use its same molecule synthetic resin type water stop (EVA, PE, ECB, HDPE, PVC).



Width (mm)	Thickness (mm)	Horizontal and vertical deformation of the deformation joint (mm)				
		10	20	30	40	50
200	6	●				
250	6	○	●			
300	8	○	○	●		
350	8	○	○	●		
400	10		○	○	●	
450	12				●	●
500	12				○	●
● - stands for very suitable construction						
○ - only available to construction						



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◆ Quality requirements of sealing appearance

No.	Defect	Appearance quality requirements	
1	Bubbles, Dents, Impurities, Ming scar	Allow depth of not more than 2 mm. An area of not more than 16 mm <sup>2</sup> dent. Bubble impurities out scars and other defects not more than 4. Face design only allows depth greater than 1 mm. An area of not more than 10 mm <sup>2</sup> . Defects not more than three.	
2	Cracking, Lack of glue, Sponge-like	Not allowed	
3	Center hole eccentric	Must not exceed 1/3 of the thickness of the tubular section	Limit deviation
4	Thickness limit deviation	Sealing nominal thickness	+ 1 0
		4-6	+ 0.3 0
		> 6-10	+ 2
		> 10-20	
5	Width	For molded products $\pm 3\%$	



## ◆ Rubber sealing performance parameters

Item			Index		
			B	S	J
Hardness (shore A)			60 ± 5	60 ± 5	60 ± 5
Tensile strength, MPa ≥			15	12	10
Elongation of break, % ≥			380	380	300
Compression set	70°C × 24 h, % ≤		35	35	35
	23°C × 168 h, % ≤		20	20	20
Tear strength 21, kN/m ≥			30	25	25
Brittleness, °C ≤			-45	-40	-40
Hot air aging	70°C × 168 h	Hardness (shore A),≤	+8	+8	
		Tensile strength, MPa ≥	12	10	
		Elongation of break, % ≥	300	300	
	100°C × 168 h	Hardness (shore A), ≤			+8
		Tensile strength, MPa ≥			9
		Elongation of break, % ≥			250
Ozone testing 50 PHM: 20%, 48 h			2 grade	2 grade	0
Banding, rubber/metal			Failed in the rubber side		

### ● Note

1. Banding, rubber/metal only be applicable to water-stop with steel plate.
2. If other special needs when appropriate may be negotiated stingy inspection, as appropriate, according to user needs assessment mold testing, but its antifungal properties should be equal to or greater than 2.

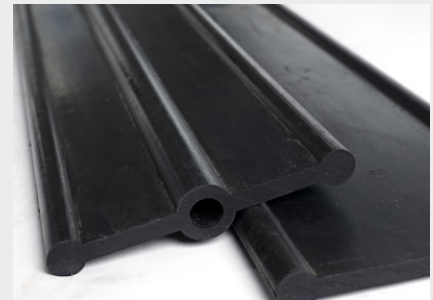


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## ◆ Rubber sealing strip application scope and standards

Rubber sealing strip with water swelling rubber water can be applied to underground structures like dams, reservoirs, swimming pools, roofing and other building materials and structures used in the deformation joint waterproof. Because concrete structure has become one of the basic part of the engineering, underground facilities, tunnels, culverts, water aqueducts, dams, and rubber sealing strip is mainly used for concrete cast in the construction joints and deformation for ensuring life of the project construction. So it is very important in construction.

Water-stop complies with GB18173.2-2000 standard for polymer waterproof material - water stop production. According to users' piratical requirements in different projects, different parts, different slopes, our products can equipped with cross. What's more, the angle of inside and outside rubber water-stop connector products can also be applied to any special designs.



Thickness (mm)	Width (mm)	Height of water-stop head (m)										
		2	4	6	8	10	12	14	16	18	20	22
6	200	○	●									
6	250	○	○	●								
6	300		○	○	●							
8	350			○	○	●						
10	400				○	○	●					
12	450					○	○	●				
12	500						○	○	●			
16	500							○	○	●		
20	500									○	○	●

● - stands for very suitable construction

○ - only available to construction

## ◆ Construction and installation of rubber water-stop

In construction, some or all of the rubber water-stop is buried in the concrete during pouring process. Because there maybe are many sharp corner stones and sharp steel heads in concrete, we need notice its installation positioning method and pouring pressure during water-stop position and concrete-pouring process to avoid water-stop punctured. Due to the tear strength of rubber/PVC materials is lower than strong stretching by 3-5 times, its product ability to resist external forces will significantly reduced if water-stop punctured. So in order to keep effective of waterproof function, specific matters tips in construction as follows:

A. Rubber water-stop can't resist long time outdoor exposure, should prevent from the rain, do not contact with strong polluting chemicals. It's better to keep products in stored places where temperature changes from - 10°C to + 30°C, and relative humidity from 40% to 80%.

B. During transportation and construction, you should prevent the products from damage of the machinery or steel bar. The storage and transportation of finished products should be taken in the flat circumstance, don't increase the pressure.

C. In construction process, the product must be installed properly, avoid the displacement during concreting and guarantee the water stop in the correct position in concrete.

D. The common methods of fixing water-stop: using the additional reinforcement fixing, special fixture fixing, lead wire and fixed templates fixing, etc. If you want to punch, only need to select edge part of the installation area, shall not damage other parts.

E. When ordering the products, according to the engineering structure, calculation length of good product design, you should provide us drawings. Because the heterotypic structure should have the drawings and we can check the hose connection in the whole part. Because of the production process or transportation limitation, needing connecting at the scene, you should adopt the method of the electric heating plate vulcanizing bonding or cold bonding (rubber water-stop) or welding (plastic water-stop) method. And if you still have difficulties in construction process, our company can send technical personnel on-site guidance.

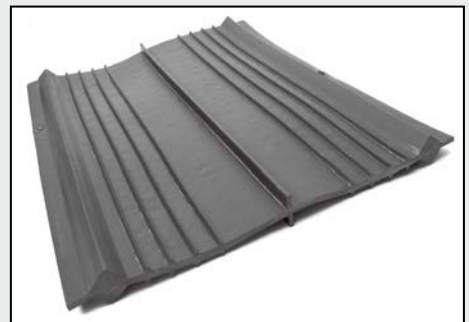
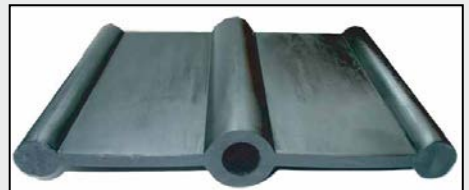




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## ◆ Notice during transportation and storage

During transportation and storage, products should avoid direct sunlight, should not contact with heat, oil and hazardous solvents. Do not affect the quality of rubber in contact with the substance. Finished product should be taken straight flat, do not increase the pressure. Storage areas best kept from  $-10^{\circ}\text{C}$  to  $+30^{\circ}\text{C}$ , relative humidity 40% - 80%, and should be kept clean.



## PVC Water-stop

PVC water-stop, being embedded in the concrete joints, acts as a continuous watertight diaphragm to prevent any seepage of liquids in constructions joints which are subject to hydrostatic pressure. It is designed for expansion or contraction joint; meanwhile, it can accommodate lateral and transverse movements which make it capable to suit the moving joints. As a factory, we can manufacture according to your request.



### ◆ PVC water-stop specifications

- Colors: blue, black, yellow, gray, etc.
- General length: 150 mm, 250 mm, 300 mm, 350 mm, 400 mm, 450 mm, 500 mm, 600 mm etc.
- Thickness: 3 mm, 5 mm, 8 mm, 10 mm, etc.

No.	Item	Unit	Parameter
1	Hardness	Shore A	> 65
2	Tensile strength	MPa	≥ 12
3	Elongation	%	≥ 300
4	Tensile modulus	MPa	≥ 5.5
5	Brittleness temperature	°C	< -38
6	Bibulous rate	%	< 0.5
7	Air aging (70 ± 1°C, 240 hours)	%	≥ 95
8	Alkali effect coefficient (20% alkali liquor, NaOH or KON)		≥ 95



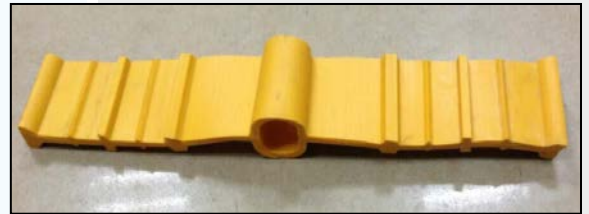


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## ◆ PVC water-stop features

Water-stops are manufactured from customized anti-aging plastic combined with PVC as a base polymer, then adding plasticizer, stabilizer, through extrusion processing.

- High elasticity and tensile strength.
- Lower water absorption.
- Corrosion resistance and weather resistance.
- Unaffected by acids, alkali, metals salts and other chemicals.
- Withstand high hydrostatic pressure.
- Withstand shocks of heavy turbines, earth quakes, floods, etc.



## ◆ PVC water-stop applications

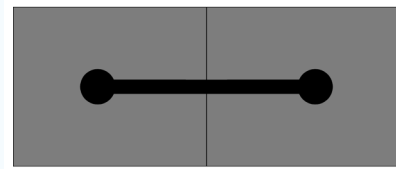
- Dams, locks, canals, water reservoirs and aqueducts
- Water and waste water treatment facilities
- Primary and secondary containment structures
- Storage tanks
- Bridge and deck abutments
- Slabs-on-grade
- Retaining walls
- Foundation
- Parking garages



## ◆ PVC water-stop different types

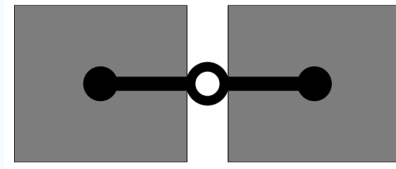
### Dumbbell

With the largest and thickest profile, the dumbbell water-stops is ideal for construction joints and contraction joints where little or no movements are expected. Meanwhile, it can be heat welded.



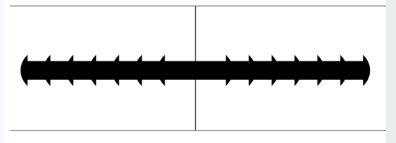
### Dumbbell with centre bulb

Dumbbell with center bulb water-stops are capable to withstand large scale of movements. Largest and thickest profiles make this water-stop ideal for construction, control and expansion joints, on grade joints at wall/slab junctions, also suitable for subsidence, contraction expansion joints, including high movement joints. Meanwhile, it also can be heat-welded by standard splicing iron.



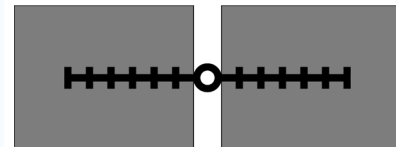
### Ribbed flat

The ribs effectively enhance the bond strength between water-stop and surrounding concrete. Meanwhile, it also improves water sealing capability of water-stops. And ribbed flat water-stop is ideal for construction joints with little or no movement.



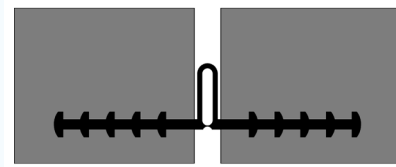
### Ribbed with center bulb

The center bulb will absorb the shear movements whether in lateral or transverse direction. Normally, the bigger the center bulbs are, the greater movements the water-stops will accommodate. Meanwhile, the ribs not only make the concrete and water-stop bonding together, but also provide a long fluid-flow path for water-proofing. And this type water-stop is ideal for expansion, construction, control joints and other joints with shear movements.



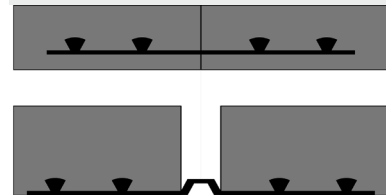
### Ribbed with tear web

U-shaped center bulb of tear web water-stops is the largest feature. It will tear when being subjected to large movements such as joint expansion or differential settlements. Additionally, the ribs effectively increase the contacting surface between water-stop and concrete, therefore the water-stop can hold the surrounding concrete firmly than others without ribs. And this type water-stop is ideal for expansion joints with large movements such as tank ring foundations.



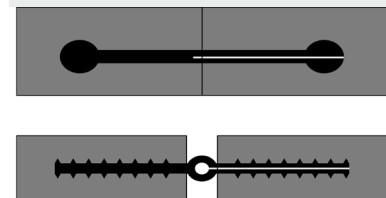
### Base seal

Base seal water-stop is easiest to install, as well as can be heated-welded by standard splicing iron. And this type water-stop is ideal for construction, contraction, control and expansion joints flat pavement jobs. For example, they are suitable for runways, large containment slabs, concrete walls, backfilled retaining walls, etc.



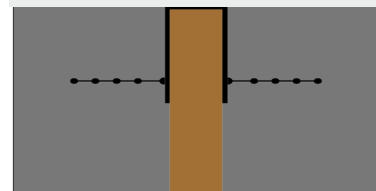
### Split water-stop

With features similar to dumbbell water-stops, split dumbbell is ideal for construction joints with little or no movements. With features similar to split ribbed water-stops, split ribbed is ideal for expansion moving joints on or below grade.



### Cap water-stop

Acting as a fluid tight internal seal, the cap water-stop is long lasting and attractive to be installed on the top of expansion joints. Meanwhile, it efficiently accelerates the project schedules. And this type water-stop is ideal for expansion joints with expansion boards.



## ◆PVC water-stop storage & package

- During transport and storage, the packing should not be impacted and damaged.
- It should be placed in ventilated and dry indoors.
- Kept away from direct sunlight.
- Prohibit contacting acid, alkali, oil, organic solvent, etc.
- Insulated from heat resource.
- Sold by roll (25 m or 20 m per roll) or individual for intersections.







**JINGTONG**

## Hydrophilic Expansion Water-stop Strip



This kind of product includes: PZ type & PN type. We can provide products of 150%-600% volume expansivity. Products complies with GB18173.3-2002 Polymer waterproof materials - Part 3: hydrophilic expansion water-stop.

- **PN type water swelling Bentonite strip**

Cross section of water stop respectively including 12 × 12, 15 × 15, 10 × 20, 15 × 20, 20 × 30, 20 × 50, 50 × 50 (mm), etc.

- **PZ type water swelling Bentonite strip**

Water swelling expansion water stop is a new type of water stop product. It not only has the common features of general rubber products but also has the ability of meet-water automatic expanding. So it is more reliable than ordinary waterproof materials.

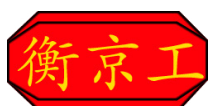
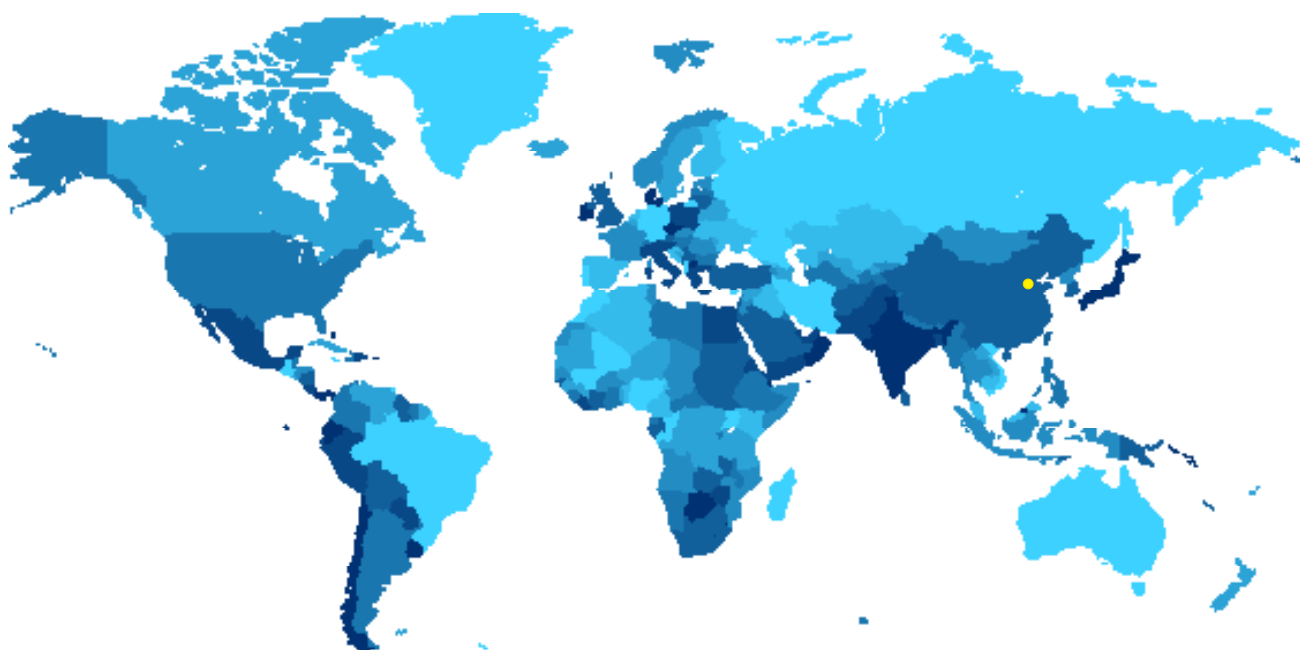
- **Package**

5-6 m in a roll, 30 m packed in a small carton and also can be customized.

## Waterproof Sheet



Material of this kind of product includes: EVA, PE, ECB, PVC, etc. We can provide products of 1.2-4.0 mm thickness and 2-6 m with. Products comply with: GB18173.1-2012 Polymer waterproof materials-Part 1: Water proof sheet and KEJJI [2008] No. 21 document.



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