FULLY SEALED WATERPROOF
SPECIAL FOR CONCRETE STRUCTURES

XINIUPI YIPINNENG

REACTIVE ADHESIVE WATERPROOFING MEMBRANE

ONE PRODUCT CATEGORY CAN SOLVE
ALL THE WATERPROOFING PROBLEMS OF CONCRETE STRUCTURES

XINIUPI YIPINNENG REACTIVE ADHESIVE WATERPROOFING MEMBRANE

SCI-TECH ACHIEVEMENTS OF NATIONAL DOUBLE DEMONSTRATION ENTERPRISE

IT BRINGS THREE CORE VALUES TO THE PROJECT:

1 More durable, with long-term effective sealing and waterproofing

It can withstand being soaked in water 360° all around without leaking, providing safer and more long-lasting waterproofing.

2 More flexible, crack-resistant and compatible with sealing

It is thin and tough, flexible and crack-resistant. Made of the same material, it can achieve integral sealing and waterproofing.

3 Easier to construct, saving labor and time

It can be constructed in all weather conditions and environments.
With intelligent adherence, it can seal following the shape of the object.
It can meet the needs of the project progress and reduce the construction period.

NATIONAL DOUBLE AWARD
TECHNOLOGY UPGRADED PRODUCT

⊙ **NATIONAL KEY NEW PRODUCT** GUO KE FA JI. [2014] NO. 303

⊙ **CHINA PATENT EXCELLENCE AWARD** GUO ZHI FA GUAN ZI. [2014] NO. 63

The CPS reactive adhesive technology and products have won two major national honors.

HIGH PERFORMANCE
MULTIPLE FUNCTIONS

One category solves all concrete building waterproofing needs

WATERPROOFING IS A FUNCTIONAL LAYER, NOT A DECORATIVE LAYER.

- It is a protective layer for the value of a building.
- It is a protective layer for the interests of investors.
- Don't let our brand lose due to water leakage!

CONTENT

YIPINNENG REACTIVE ADHESIVE
WATERPROOFING MEMBRANE

01

The'Three Golden Standards'for Effective Waterproofing of Concrete Structures

- Golden Standard 1: Durable Bonding and Sealing
- Golden Standard 2: Close Adhesion and Crack Resistance Sealing
- Golden Standard 3: Compatible Integral Sealing

The "Three Golden Standards" for Effective Waterproofing of Concrete Structures

Based on the objective factors at the site of concrete buildings,
it can meet the on-site needs and comply with the standards and specifications.

To achieve effective waterproofing, three "musts" need to be fulfilled.

Golden Standard 1:

It must have durable bonding and sealing.

In the actual environment, the waterproof layer must be able to "integrate" with the base surface.
There should be bonding and sealing over the large surface area as well as in the detailed parts.
The bonding should be long-lasting, achieving a 360° full seal without water leakage, so as to
realize integral, long-term and sealed waterproofing.

Golden Standard 2:

Golden Standard 2: It must have close adhesion, crack resistance and sealing.

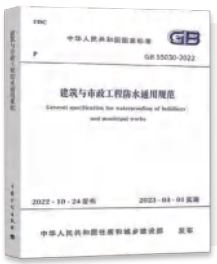
The waterproof layer must be flexible and crack-resistant, and it should adhere closely to the surface and be easy to construct.
It should be able to adapt to the complex and changeable environment of building structures, provide crack resistance and sealing,
and ensure long-term waterproofing.

Golden Standard 3:

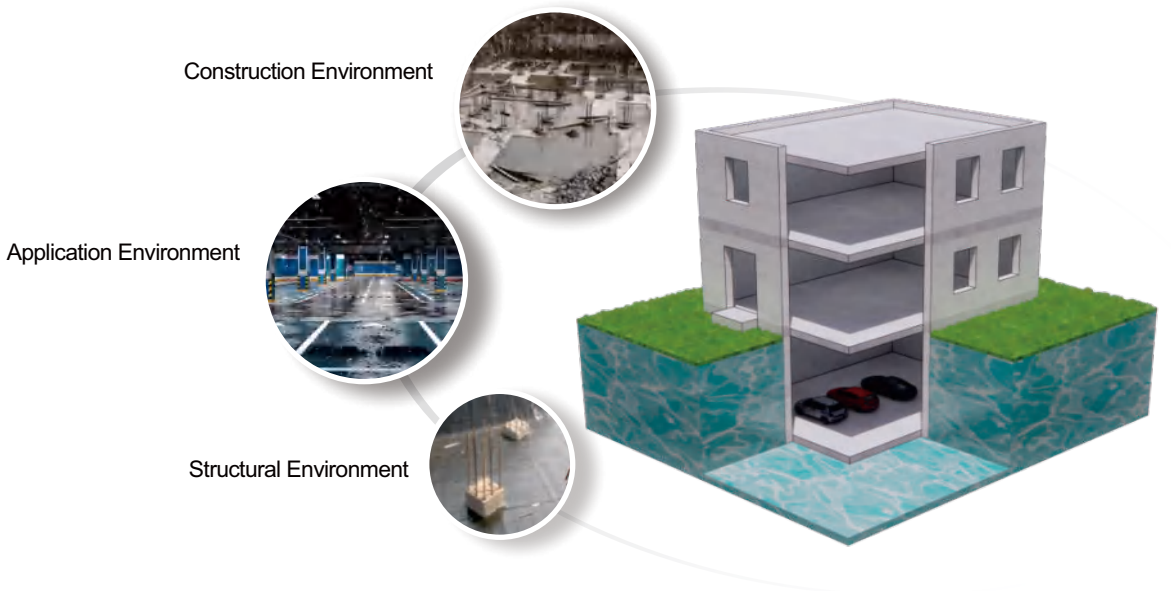
Golden Standard 3: It must have compatible integral sealing.

The same materials are used for different parts, with stable integration, achieving compatible bonding and compatible sealing.
An integral and continuous sealed waterproof layer is formed to ensure long-term waterproofing.

"Three Golden Standards" for Effective Waterproofing of Concrete Buildings



Based on the application practices of waterproofing for concrete buildings and the requirements of waterproofing specifications,
When formulating waterproofing design schemes and selecting materials, there are three criteria for judging to ensure effective waterproofing.
Starting from the application and being responsible for the results,It ensures that the waterproofing is compliant, controllable and effective.



Golden Standard 1: Durable Bonding and Sealing
It must be able to adapt to complex construction environments.

The complex construction environment of concrete buildings

The on-site environment such as a damp base surface and humidity

Human factors such as rushing to meet the construction schedule and cross-operation

It should be capable of achieving: durable bonding, sealing and waterproofing, as well as long.term waterproofing. It is preferable to choose: waterproofing materials that can be constructed in a damp and humid environment and can achieve durable bonding and effective sealing.

The following types of waterproofing materials should be avoided:

waterproofing materials that cannot bond effectively with the base layer. In a damp and humid environment, the waterproofing layer fails to bond effectively with the base surface.

waterproofing materials that cannot adapt to the on - site humid conditions. waterproofing materials applied by the hot - melt method cannot bond and seal on a damp and humid base surface.

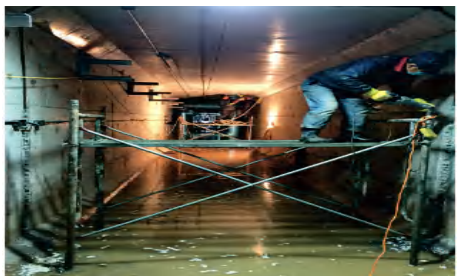
waterproofing materials that cannot be protected in a timely manner. Cross - operations can cause damage to the waterproofing layer, leading to premature failure of the waterproofing.

Golden Standard 2: Conforming, Crack - resistant and Sealing
It must be adaptable to complex structural environments.

The structural environment of concrete buildings is complex.

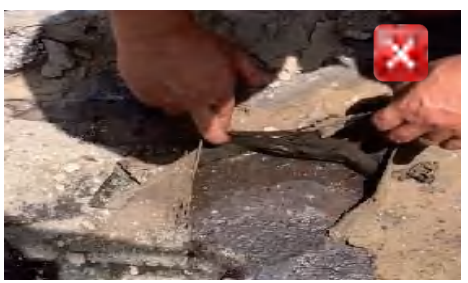
The structures are irregular and changeable, with dynamic cracks

construction joints, numerous pipe root nodes, and diverse materials.



Capable of: conforming during construction, crack - resistant sealing, and long - term waterproofing.
Preferred choices: waterproofing materials that are soft and conformable, elastic and crack - resistant.

The following types of waterproofing materials should be avoided:



Rigid and non - conforming waterproofing materials. If the material is rigid and non - conforming, it cannot conform to irregular structures, thus failing to achieve full adhesion and sealing.

waterproofing materials without creep - resistant and crack - resistant properties.A single - component waterproofing layer is not crack - resistant. It is prone to cracking along with the base layer, getting damaged and resulting in leakage.

waterproofing materials that cannot achieve compatible sealing between large areas and details.Materials for large areas and details are incompatible, making it impossible to bond and seal.

Golden Standard 3: Compatible and Integrated Sealing

It must be adaptable to the complex application environments of engineering projects.

Complex application environments of engineering projects

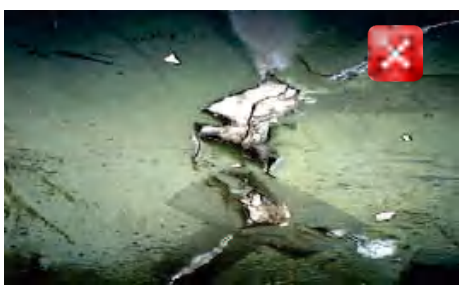
Long - term humid or water - soaked environments, long - term exposure to water pressure or non - directional water flow

alternation of dry and wet conditions, heat - moisture cycling, and temperature differences.

Capable of: compatible sealing, integrated sealing, and long - term waterproofing.
Preferred choice: waterproofing materials of the same category that can compatibly bond and achieve integrated sealing.

The following types of waterproofing materials should be avoided:

Waterproofing materials that are not water - resistant and durable.The waterproofing layer has poor water resistance. After absorbing water and swelling, it will delaminate and debond from the base surface.



Waterproofing materials that cannot achieve full - contact and sealed adhesion with the base layer.In an environment with alternating dry and wet conditions and temperature changes, the waterproofing layer will debond from the base surface.

Mixing and using incompatible waterproofing materials of different materials.waterproofing materials of different materials cannot be integrated, bonded, and sealed properly, resulting in water seepage.

02

Three Breakthroughs in Yipinneng Waterproofing Technology Fully Aligned with the "Three Golden Standards" for Effective Waterproofing

- Core Technology 1: Reactive Adhesion 2.0 Technology
- Core Technology 2: Application Technology of High-performance Base Fabric
- Yipinneng Brings Three Core Values to Projects
- Engineering Application Cases of Yipinneng

Yipineng's Three Core Technological Breakthroughs

Aligned with the Three Golden Standards for Effective Waterproofing,
these are the most effective waterproofing practices for treating leakage in concrete buildings.

Benchmarked against durable bonding and sealing

Benchmarked against integrity
Compatible sealing

Benchmarked against conformability
Crack - resistant sealing

Sealing of detailed parts

Sealing of large surfaces

Compatible sealing

Core Technology ①

Reactive Adhesion 2.0 Technology

Irreversible Interface Adhesive Technology:

Let the waterproofing layer "grow" with concrete, achieving long-lasting Adhesive, sealing waterproofing without water channeling

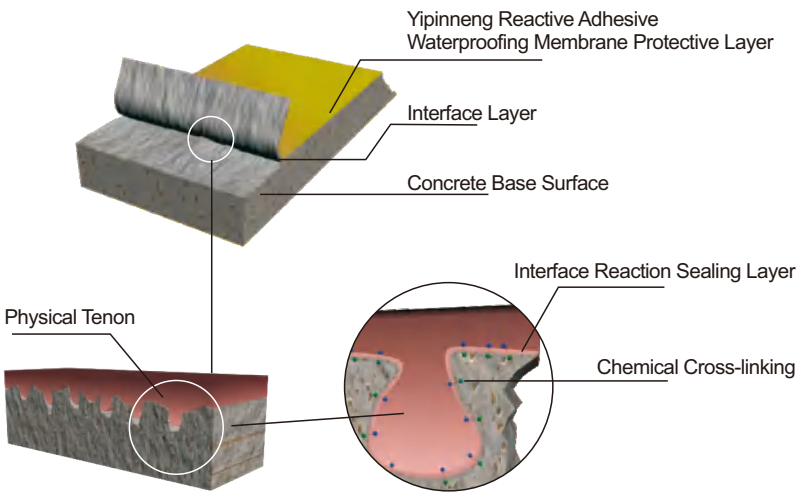
C Chemical Bonding

P Physical Crosslinking

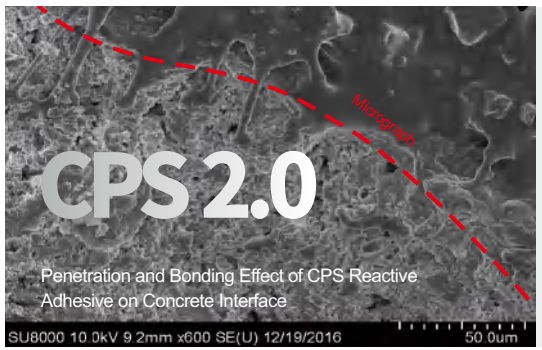
S Synergism

The reactive adhesive interface adhesive technology is a unique interface Adhesive technology developed by Xiniupi waterproofing specially for the sealing waterproofing of concrete buildings. It is designed to solve the problems of de-adhesive and hollowing that occur when ordinary waterproofing membranes are bonded to concrete, which are easily affected by factors such as environmental moisture-heat cycles, water vapor swelling, and substrate movement.

It won the China Patent Excellence Award in 2014. It is the only asphalt-based waterproofing membrane that has won the China Patent Award. This patented technology product is the first revolutionary breakthrough in concrete sealing waterproofing, filling the gap in this field and solving the global problem of concrete sealing waterproofing.



Schematic Diagram of CPS Reactive Adhesive Interface Adhesive Technology

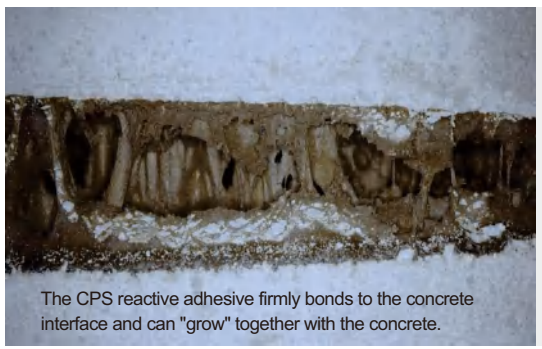


Irreversible Bonding Technology

Greater Bonding Force: There are not only physical adsorption and mortise - tenon effects, but also chemical bond effects occurring at the mortise - tenon parts that penetrate deep into the concrete base layer. This enables the synergistic operation of mortise - tenon and chemical cross - linking, resulting in more secure bonding.

More Durable Bonding: Chemical cross - links exist at the interface sealing parts, ensuring firm and irreversible bonding.

More Stable waterproofing Layer: By upgrading the modification technology of CPS reactive adhesive compound, it integrates with the base material, making the membrane itself more stable and durable!



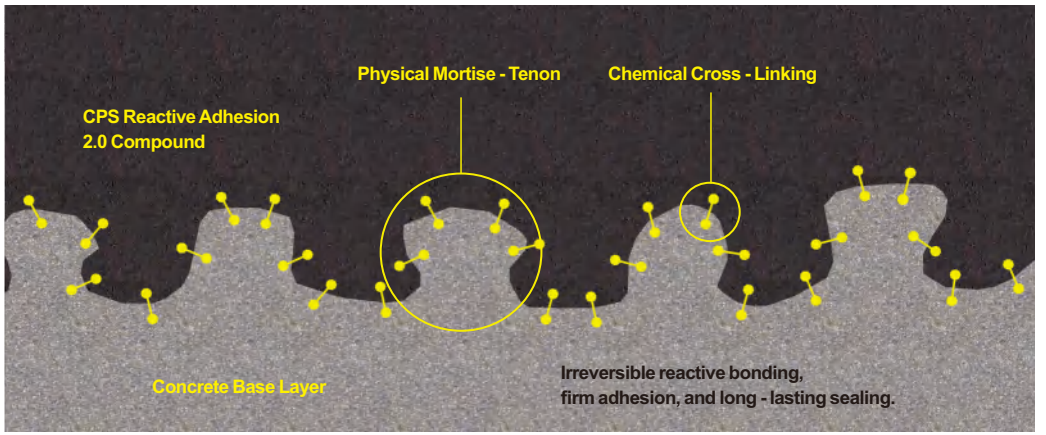
The CPS reactive adhesive firmly bonds to the concrete interface and can "grow" together with the concrete.

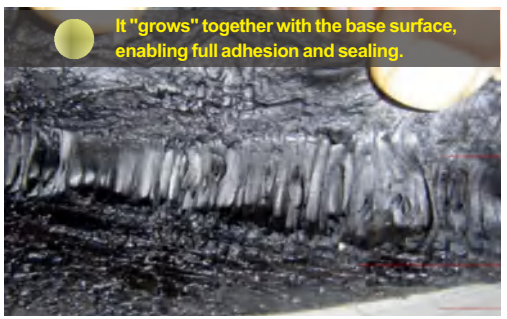
The CPS reactive adhesive 2.0 forms a continuous and dense interface sealing layer on the concrete surface, resulting in even more reliable bonding. Even if the structural layer is damaged, the waterproofing layer remains firmly bonded to the structural layer without separation, just like "bones and flesh being closely connected", thus preventing water seepage. Moreover, it is not affected by the environment, being able to bond in both dry and wet conditions, and enabling all - weather construction.

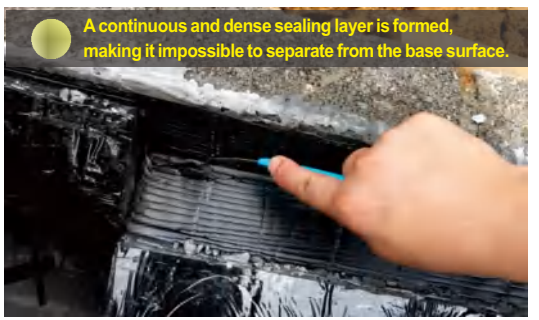
Application Advantages of Reactive Adhesion 2.0 Technology:

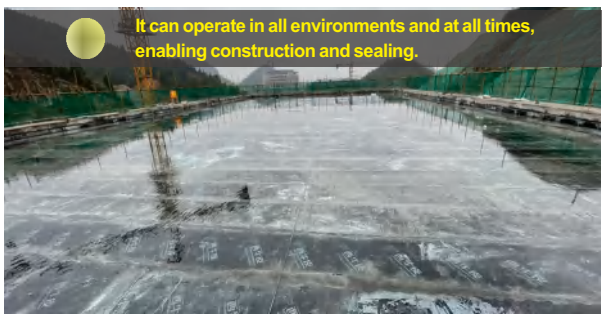
Bonded and sealed with concrete for long - term waterproofing

—— Solving the problem of large - area water seepage in traditional waterproofing due to poor adhesion and sealing.









No water seepage at the lap joint under 60 - meter water pressure

Anti - water - seepage test of the lap joint of Yipineng reactive adhesion Waterproofing Membrane: 0.6 MPa, no water seepage

Take multiple groups of specimens. Load the prepared specimens into a concrete impermeability tester with the membrane surface facing the water. After pressurizing to the set value, maintain it for 24 hours. Then increase the pressure by 0.1 MPa and maintain it for 4 hours. After the test, remove the specimens, peel off the membrane, and observe whether there is any water seepage on the bonding surface of the membrane.

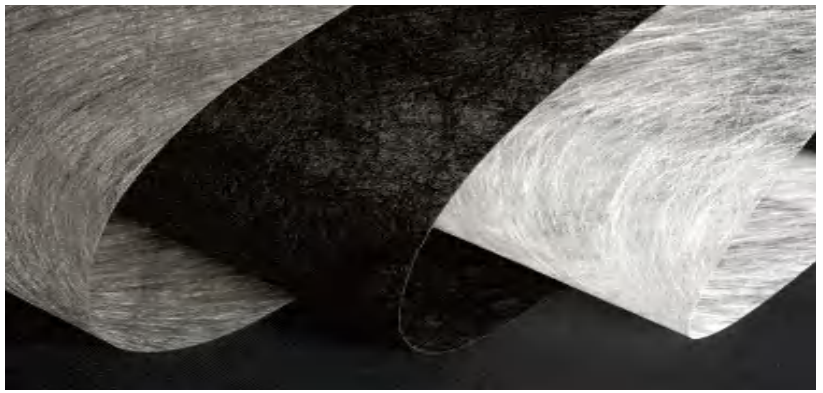
Anti - water - seepage test of the lap joint of Yipineng reactive adhesion Waterproofing Membrane

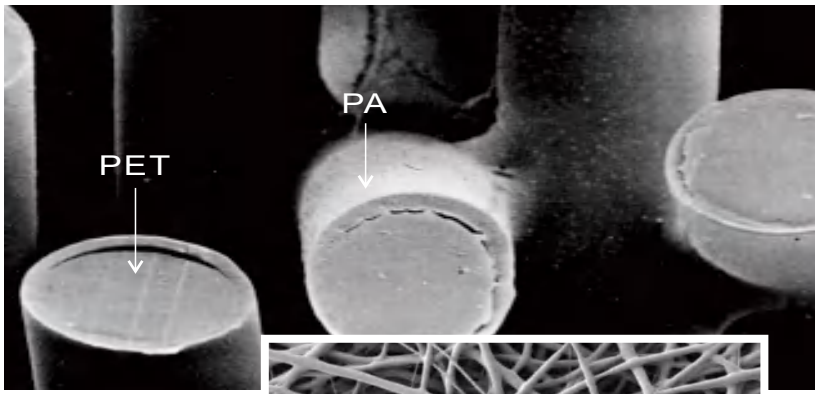
Test Conditions	Lapping Method	Number of Specimens	Number of Specimens with Water
Constant pressure of 0.3MPa for 24h, then increased to 0.4MPa and kept at a constant pressure for 4h	Double - sided wet - laid lapping	9	0
Constant pressure of 0.4MPa for 24h, then increased to 0.5MPa and kept at a constant pressure for 4h	Double - sided wet - laid lapping	9	0
Constant pressure of 0.5MPa for 24h, then increased to 0.6MPa and kept at a constant pressure for 4h	Double - sided wet - laid lapping	6	0

Core Technology ②

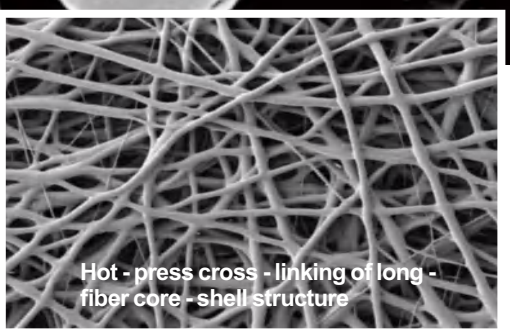
The Germany-based Freudenberg High-Performance Reinforcement Core

The core - shell structure hot - pressed base material makes Yipineng membrane thin yet strong. It integrates stability, flexibility, crack - resistance, and is easy to conform and construct.



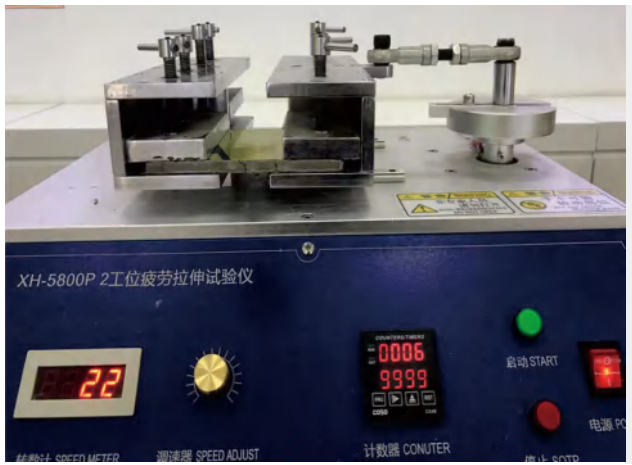


The high - performance base material from Freudenberg, Germany is made by the hot - press cross - linking process of spun fibers with a "core - shell" structure. The shell layer is made of PA, and the core layer is made of PET. The combined application of different materials is like the synergistic effect of elastic fibers and collagen fibers in the skin. The "shell" and "core" jointly bear the load and disperse stress, making it more elastic, tougher, and more conformable. With balanced performance, the base material is thin yet strong. The resulting Waterproofing Membrane has better adaptability and can conform to various building structures to form an overall sealing effected waterproofing layer.



Hot - press cross - linking of long - fiber core - shell structure

In cooperation with Freudenberg Performance Materials, a breakthrough in the "toughness" of base material application technology has been achieved.

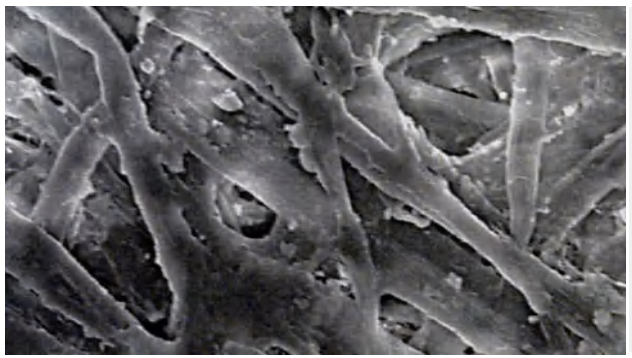


In cooperation with Freudenberg Performance Materials, a breakthrough in the "toughness" of base material application technology has been achieved.

It has balanced performance of being thin, strong, flexible and crack - resistant (tested by fatigue tensile test).

Technical indicators	Tensile force (N/50mm)	Elongation at maximum tensile force (%)	Tear force (N)
Requirements:	=250	=50	=45

Note: The above technical indicator test standards refer to "Wet - laid Waterproofing Membrane with Core - shell Structure Hot - press Cross - linked Polymer Base Material" T/CECS10173 - 2022



The interpenetrating network composite structure with the reactive adhesive is stable.

The long fibers of the core - shell structure hot - press cross - linked polymer base material have a core - shell structure with a uniform grid. Its excellent open structure and high porosity enable it to fully impregnate and integrate with the CPS reactive adhesive. Moreover, the fiber skin layer contains no glue and does not absorb water, avoiding quality problems such as water absorption, expansion, delamination, mildew, and rot of the base material caused by the inability of the base material to be coated with the adhesive.

Application Advantages of German High - Performance Base Material Technology:

The elasticity and toughness emulating rhinoceros hide make the waterproofing layer flexible and crack - resistant.

—— Solving the problem that traditional waterproofing layers are vulnerable to damage due to their inability to creep and resist cracks.

Thin and tough, with balanced performance and high tear - resistance

The core - shell structure hot - press cross - linked polymer base material is formed through hot - press cross - linking. It is thin and tough and tear - resistant. The polymer crack - resistant reinforcing base material of the same area and weight has a higher tear - resistance than traditional polyester bases and polymer films. Its excellent extensibility and strength enable it to adapt to various deformation movements during Site Construction Applications without being damaged.

Flexible and conformable, capable of sealing in any shape on various parts of the building

—— Solving the problem of traditional waterproofing layers being "stiff, non - conformable, and unable to achieve full - adhesion sealing"

Flexible and conformable, able to seal in any shape

It can be constructed on the basement floor, roof, side walls, and roofing. It can be wet - laid, dry - adhered, or pre - laid, and can achieve integrated sealing.

Yipinneng
brings three core values to projects.

- **It enables more durable sealing and long - term waterproofing.**

  —— It can withstand 360 - degree soaking in water without leakage, ensuring safer and more long - lasting waterproofing.

- **It can offer more flexibility, crack resistance, compatibility and sealing.**

  —— Being thin yet strong, flexible and crack - resistant, with the same material throughout, it provides integral waterproofing sealing.

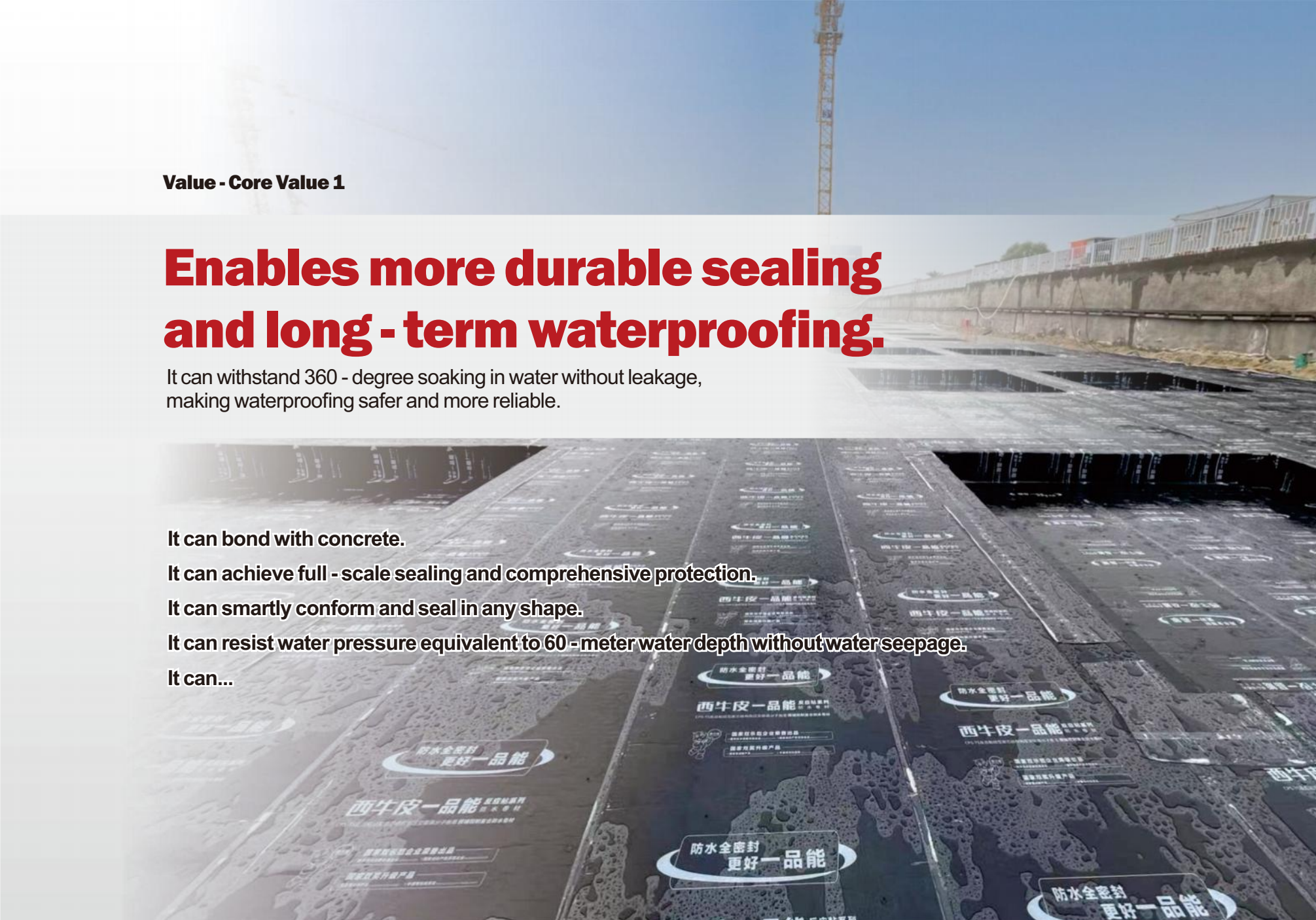
- **It can make construction easier, saving labor and time.**

  —— It allows for construction in all weather conditions and environments.
  It can smartly conform to the shape and achieve seamless sealing.
  It can meet the requirements of project schedules and reduce the construction period.

Value - Core Value 1

Enables more durable sealing and long - term waterproofing.

It can withstand 360 - degree soaking in water without leakage, making waterproofing safer and more reliable.



It can bond with concrete.

It can achieve full - scale sealing and comprehensive protection.

It can smartly conform and seal in any shape.

It can resist water pressure equivalent to 60 - meter water depth without water seepage.

It can...

Enables more flexibility, crack resistance, compatible sealing and integral waterproofing.

It is thin yet strong, flexible and crack - resistant, combining rigidity and flexibility for more durable waterproofing.

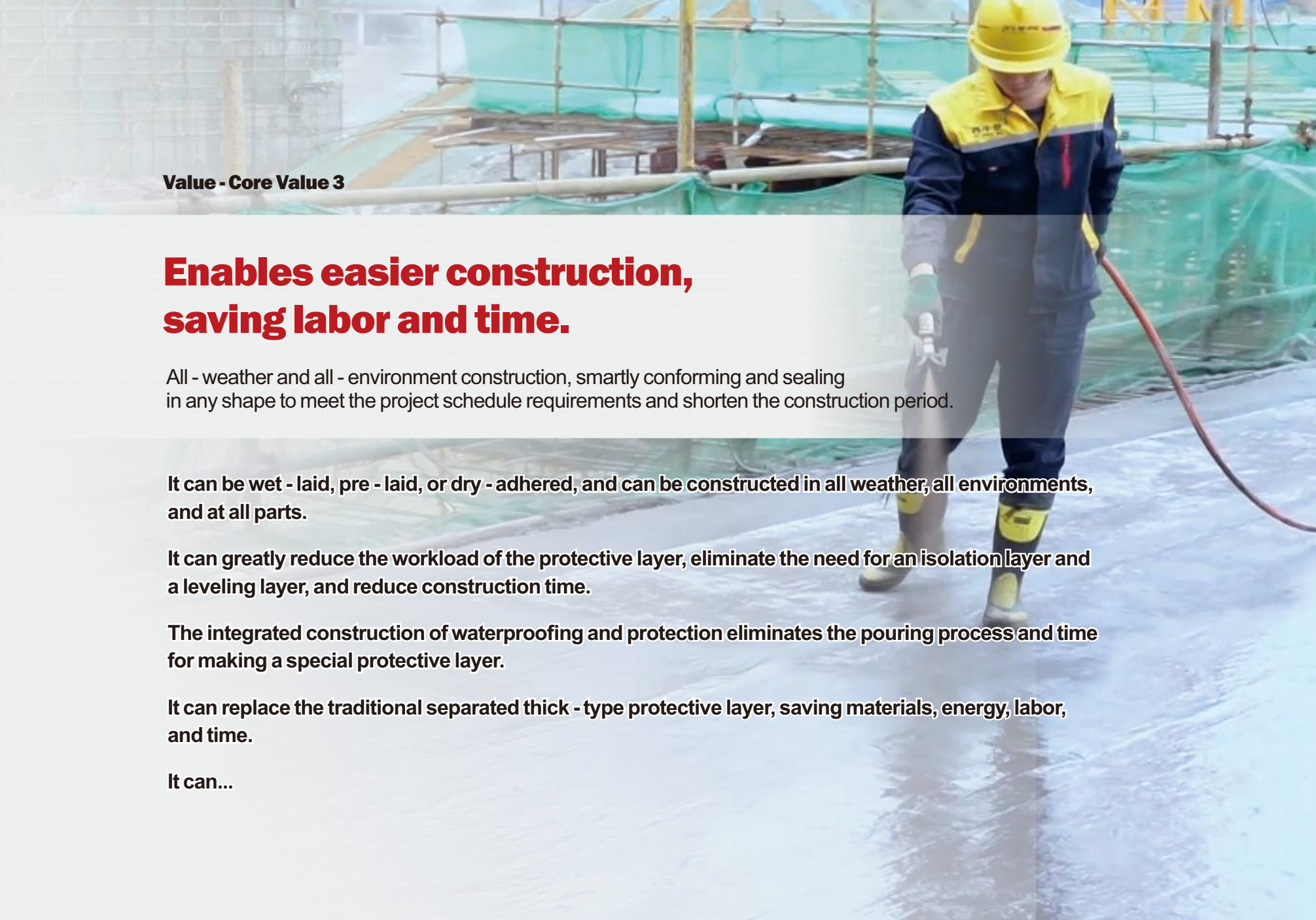
When pre - laid waterproofing is used for the floor and side walls, it can integrate waterproofing and protection, providing timely protection and preventing damage from subsequent construction.

The protective layer has high strength, is resistant to impact damage, and can't be punctured by steel bars or damaged by fire.

It can protect the waterproofing layer in a sandwich - style and from all directions, effectively blocking the external environment for long - term waterproofing.

The waterproofing layers at all parts can be compatibly sealed to form an integral waterproofing system.

It can...



Value - Core Value 3

Enables easier construction, saving labor and time.

All - weather and all - environment construction, smartly conforming and sealing in any shape to meet the project schedule requirements and shorten the construction period.

It can be wet - laid, pre - laid, or dry - adhered, and can be constructed in all weather, all environments, and at all parts.

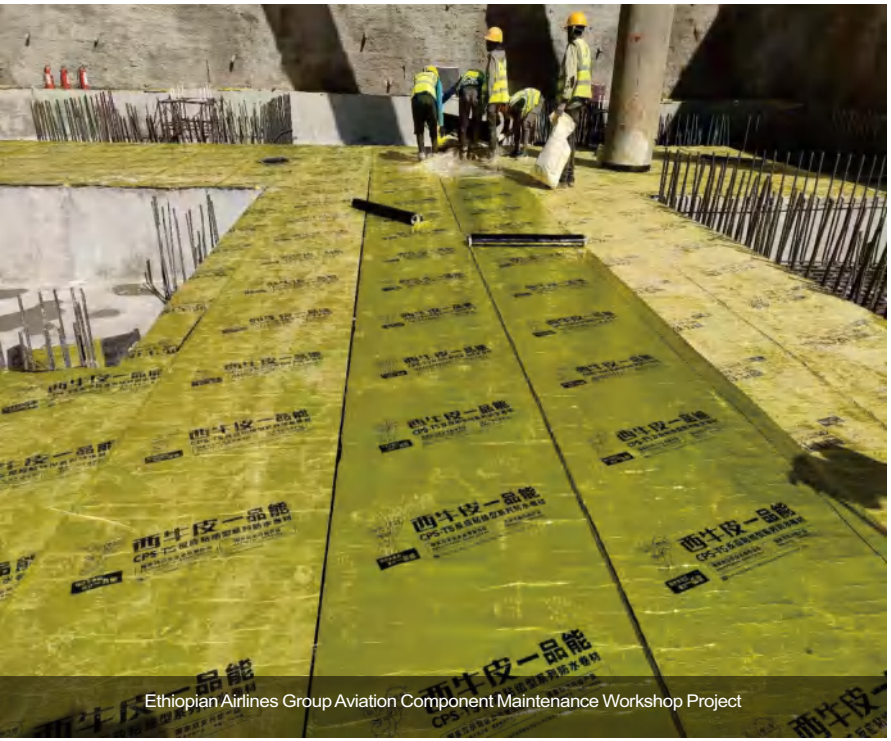
It can greatly reduce the workload of the protective layer, eliminate the need for an isolation layer and a leveling layer, and reduce construction time.

The integrated construction of waterproofing and protection eliminates the pouring process and time for making a special protective layer.

It can replace the traditional separated thick - type protective layer, saving materials, energy, labor, and time.

It can...

Site Construction Application Examples of Yipineng:



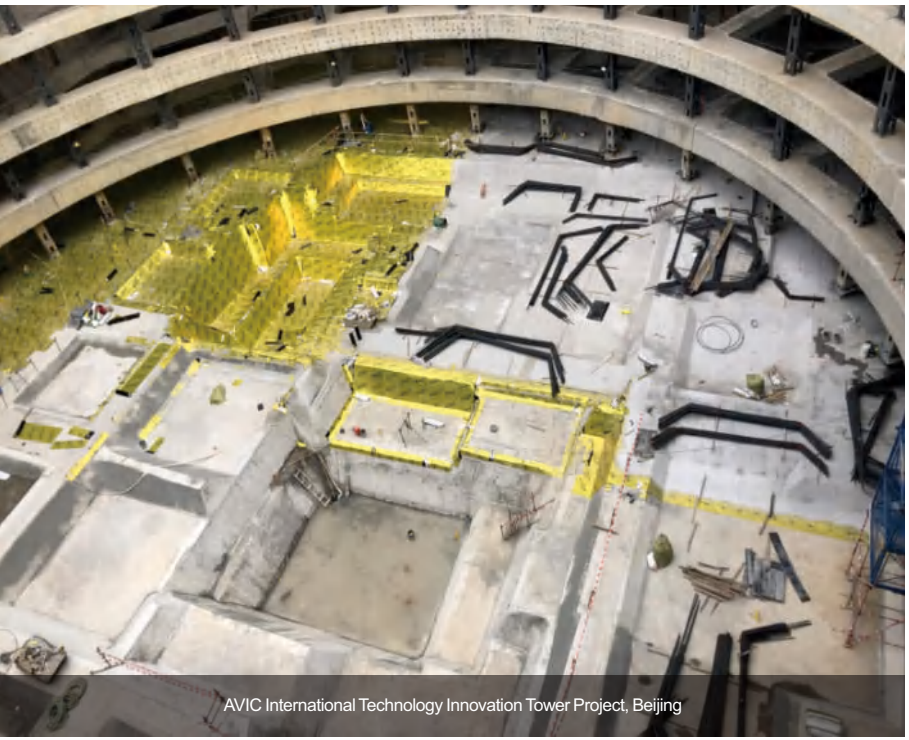
Ethiopian Airlines Group Aviation Component Maintenance Workshop Project


Ethiopian Airlines Data Center Project

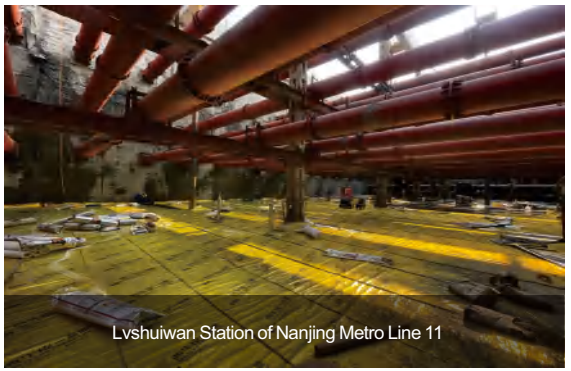

Multimedia Conference System Project for the Ministry of Agriculture, Ethiopia


Oromia Regional High Court Project, Ethiopia


Ethiopian Airlines Material Warehouse Project



AVIC International Technology Innovation Tower Project, Beijing



Lvshuiwan Station of Nanjing Metro Line 11

Phase II of Renfu Global Headquarters Base Project, Yichang, Hubei

Taicang High-Speed Railway Station, Jiangsu

Wuxi Light Rail Transit Project, Jiangsu

03

Solve the Three Major Flaws of Traditional Waterproofing

- Flaw 1:In traditional waterproofing layers, there is poor adhesion and sealing between the waterproofing layer and the structural layer, leading to water seepage and leakage.
- Flaw 2: Traditional waterproofing layers are too stiff to adhere closely or have poor crack resistance.
- Flaw 3:In traditional waterproofing, multiple types of waterproofing layers are mixed together. Different types are incompatible with each other, making it difficult to achieve integral sealing.

Yipinneng brings
three major advancements in waterproofing:

Advancement 1:
It realizes the transformation from shielding - type waterproofing to sealing - type waterproofing.
This solves the problem of large - scale water seepage.

Advancement 2:
It realizes the transformation from multi - product waterproofing to one - product full - sealing waterproofing.
This solves the problems of incompatibility among multiple products and the difficulty of achieving overall waterproofing sealing.

Advancement 3:
It realizes the transformation from partial waterproofing to overall sealing effect waterproofing.
This solves the problems of the waterproofing layer not being durable and long - lasting, and the inability to achieve comprehensive sealing.

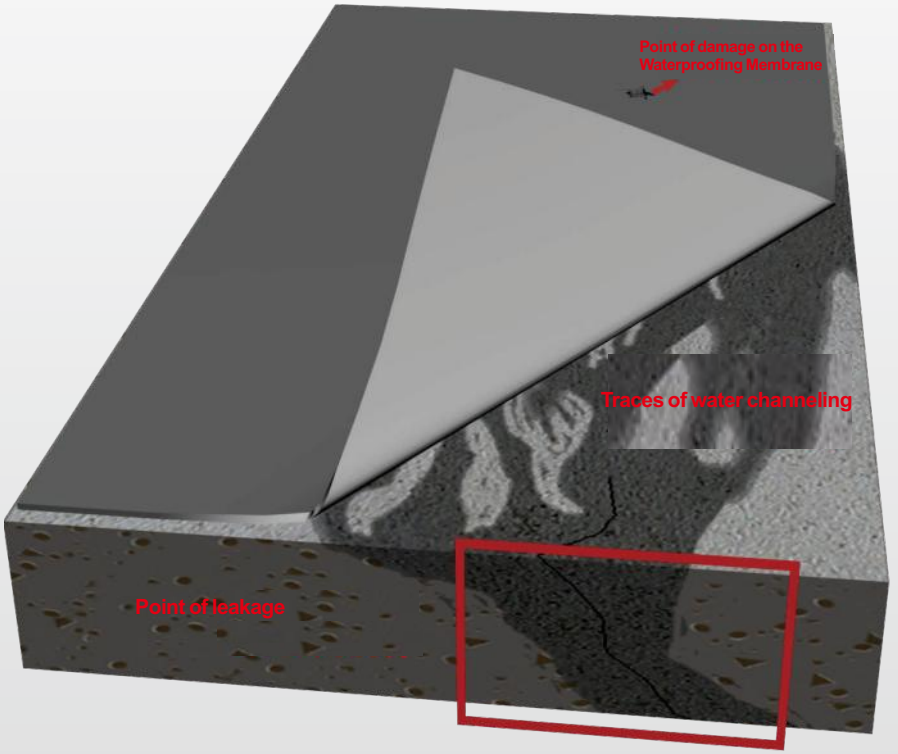
Disadvantage - Drawback 1

Between the traditional waterproofing layer and the structural layer,

There is poor adhesion and sealing, resulting in water seepage.

Traditional shielding - type waterproofing uses physical bonding, which fails to adhere properly. After three to five years, it leaks badly!

Traditional shielding - type waterproofing lacks the interface bonding technology for the waterproofing layer. As a result, the waterproofing layer and the concrete base are physically bonded, which leads to weak adhesion and easy delamination. This kind of temporary and ineffective waterproofing, once there are defects in the waterproofing layer, water will flow freely in the water - channeling layer. A single break can cause leakage over a large area, resulting in the failure of the entire waterproofing system.



True materials result in fake waterproofing

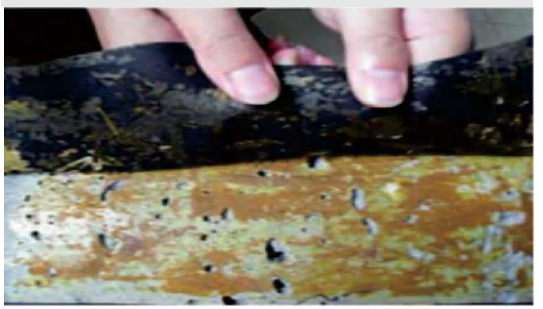
Poor adhesion and short - lived bonding, false adhesion and false sealing.

- Traditional waterproofing materials only focus on their own basic physical performance indicators.
- Neglecting the adaptability and fusion - bonding ability with the structural layer.
- This leads to a systematic risk of water seepage and channeling in waterproofing.

SBS, APP and other hot - melt modified asphalt waterproofing membranes

are bonded to the base layer through high - temperature heat fusion, which is a physical bonding method. The influence of moisture and dampness on the base surface can cause bonding failure.

Polymer waterproofing membranes such as PVC, EPDM, TPO, and HDPE



are bonded to the base surface through coatings, which is also a physical bonding method. The adhesives are prone to aging, embrittlement, and cracking, resulting in bonding failure.

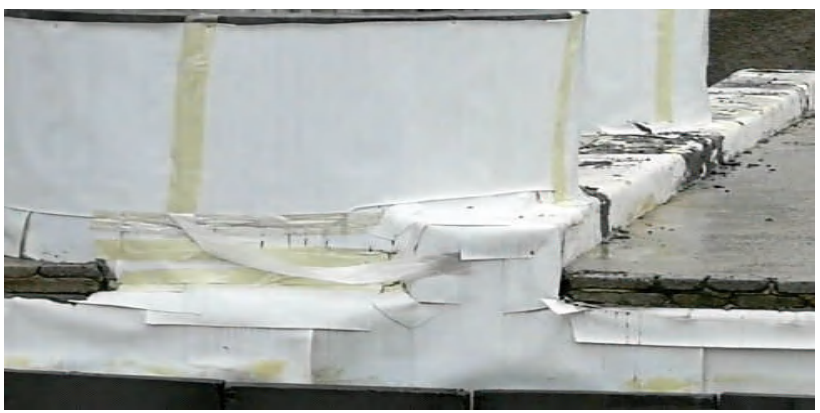
Self - adhesive waterproofing membranes

operate on a principle similar to that of transparent adhesive tape. They cannot effectively adhere to a concrete base surface that is damp, uneven, or has dust, and are prone to delamination.

Between the traditional waterproofing layer and the structural layer: they are in a state of shielding, separation, without integration or bonding.

When self - adhesive Waterproofing Membranes are wet - laid, there is no sealing layer.

Temporary adhesion and false sealing pose even greater damages.



Polymer Waterproofing Membrane materials are stiff, difficult to conform to the surface and hard to seal.

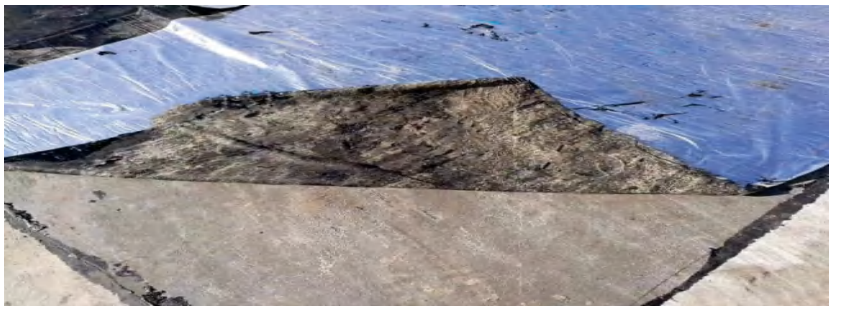
Traditional Waterproofing Membranes can't adhere to the on - site concrete substrate.

The absence of interface bonding technology means that the waterproofing layer cannot integrate with the base surface in real - world environments.

The waterproofing layer is made of organic waterproofing materials, while concrete is an inorganic material. The lack of interface bonding technology makes it extremely difficult to achieve a long - lasting and firm bond between the two. This leads to the detachment and delamination of the waterproofing layer from the concrete base, creating channels for water seepage. A single break can cause water to seep across a large area, ultimately resulting in the failure of the entire waterproofing system.

False adhesion and false sealing mean that although it seems to be adhered for the moment, it's only a temporary bond. Over time, under the influence of environmental factors, the adhesion will fail and water will seep through. This kind of temporary waterproofing is deceptive and poses a greater threat to property owners!

Traditional waterproofing materials fail to address the interface bonding technology. They can't achieve a firm or long - lasting bond, and the adhesion is reversible.



Common physical adsorption bonding, without a sealing layer, is only a temporary form of adhesion.

Construction cannot be carried out on a damp base surface, and it's difficult to bond and seal with the base surface on - site.

Self - adhesive Waterproofing Membranes can't maintain a long - term bond with the base surface.

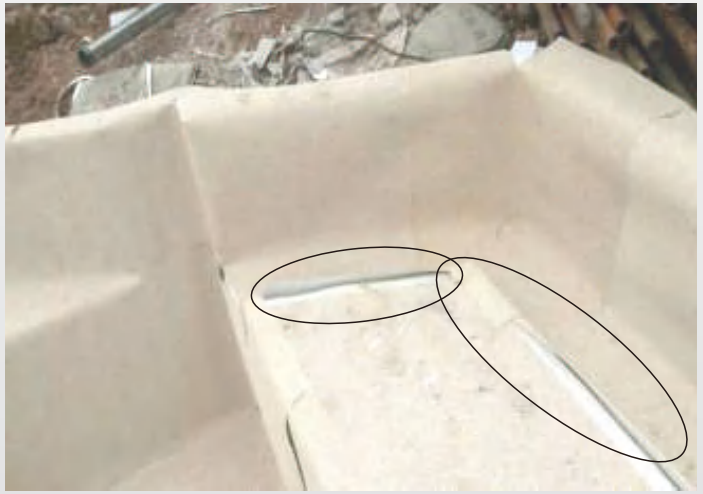
Disadvantage - Drawback 2

Traditional waterproofing layer

Stiff and non - conformable, or with poor crack - resistance

Being stiff and non - conformable makes full - adhesion sealing very difficult.

Traditional waterproofing materials rely on increasing the strength and thickness of the main waterproofing layer to resist external damage. However, the increase in thickness and strength makes the waterproofing layer stiff, non - conformable, difficult to fully adhere and seal, thus reducing the sealing and waterproofing effect.

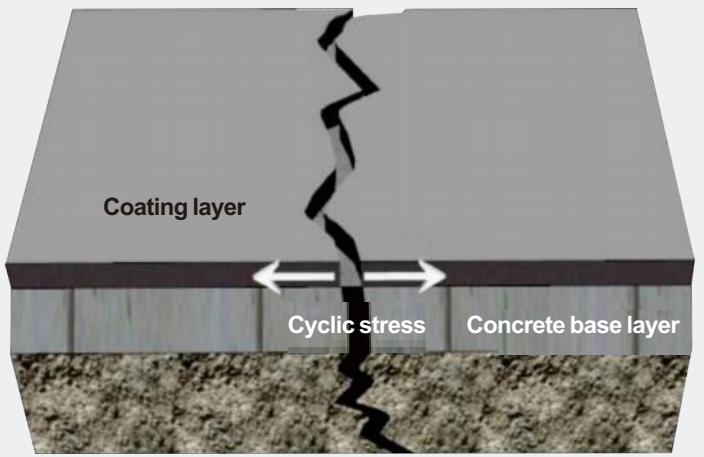


The joints and finishing areas are prone to warping, making them difficult to seal and non - conformable.

The single - component structure has poor creep and crack - resistance, and is vulnerable to structural stress damage.

Traditional waterproofing coatings are soft and conformable. However, under long - term stress, due to their "single - component" structure, they will fracture due to tensile fatigue, resulting in leakage.

The "single - component" structure of the waterproofing coating's waterproofing layer is prone to cracking and leakage.



Disadvantage - Drawback 3

Between traditional waterproofing layers

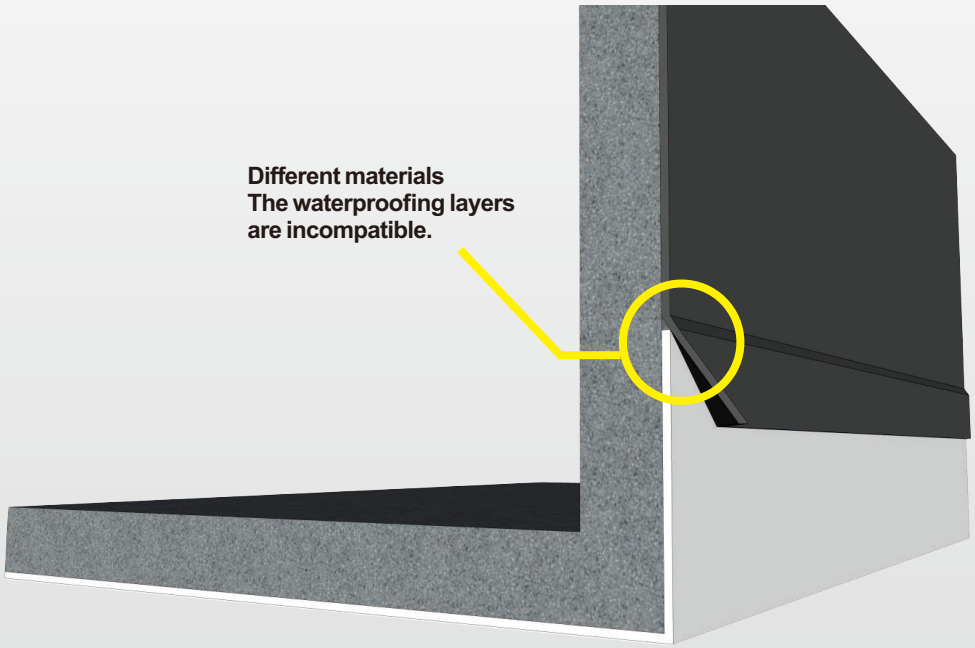
There is a mix - match of multiple products. Different products are incompatible, making overall sealing effect difficult.

Traditional waterproofing layers are incompatible with each other.

They cannot integrate and thus cannot form an overall sealing effect!

Building waterproofing requires overall sealing effected waterproofing, not just partial sealing!

Traditional waterproofing solutions often overlook the compatibility between waterproofing layers. Different waterproofing materials are used in different parts. The properties of the waterproofing layer materials are incompatible, and the construction techniques are not inter - connected. Phenomena such as weak adhesion, false adhesion, and missing adhesion often occur. The overlapping parts of the waterproofing layers cannot be compatibly sealed, leading to the formation of water - channeling zones.



Two products are incompatible, and when three are involved, everything goes wrong.

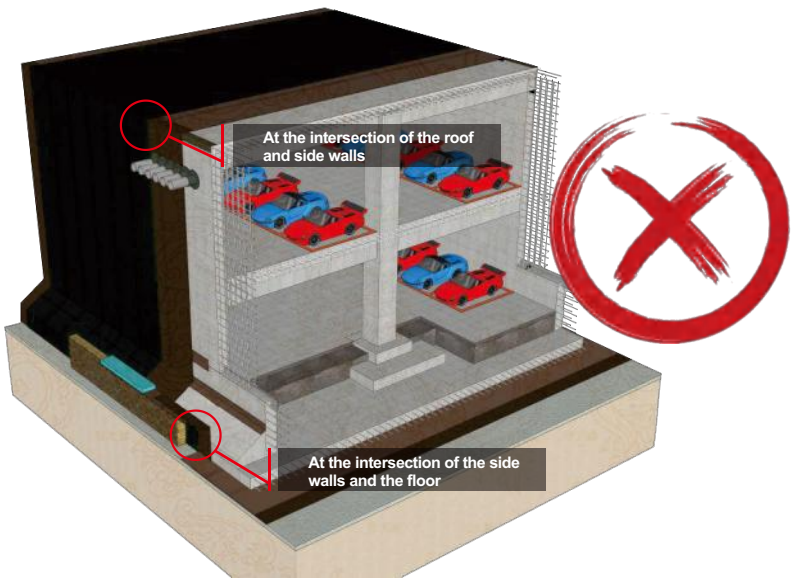
- Traditional waterproofing only focuses on local waterproofing,
- neglecting the integrity of building sealed waterproofing.
- This results in the inability of waterproofing layers to be compatibly sealed with each other, creating water - channeling zones.

Common traditional waterproofing solutions:
At the intersection of the roof and side walls
Use different materials for different parts.

Floor waterproofing: Polymer self - adhesive membrane waterproofing material

Side wall waterproofing: SBS modified asphalt waterproofing material

Roof waterproofing: Polyurethane waterproofing coating



Between traditional waterproofing layers: They cannot integrate and thus cannot form an overall sealing effect.

In traditional waterproofing, different types of waterproofing materials are selected for different parts.

They are incompatible, unable to form an overall sealing effect, and prone to creating water - channeling zones.

The construction techniques are inconsistent, and te waterproofing layers cannot be compatibly sealed.

Common roof waterproofing materials and side - wall waterproofing materials are incompatible and cannot form a continuous and seamless whole.

Waterproofing Membranes made of different materials are incompatible and cannot be compatibly sealed.

Between the waterproofing layers of different parts in traditional waterproofing: They cannot integrate and thus fail to form an overall sealing effect.

Due to the different properties of traditional waterproofing materials, it is difficult to achieve compatible sealing at the joints of waterproofing layers.

The construction techniques are inconsistent, and the waterproofing layers cannot be compatibly sealed.

Smooth polymer sheets cannot bond with polyurethane.

The hot - melt torch - heating of SBS waterproofing rolls may damage the underlying polymer rolls.

04

Yipinneng Can Solve All Building Waterproofing Problems

- Waterproofing for basement side walls / top slabs
- Waterproofing for basement floor slabs
- Exposed roof waterproofing
- The entire process of Yipinneng's engineering applications complies with laws and regulations.
- Yipinneng product information

SOLUTION | One product for all building waterproofing needs

Waterproofing for basement side walls / top slabs

Applicable to waterproofing and moisture-proofing for basement side walls, top slabs, and roof surfaces of concrete buildings, as well as subways, utility tunnels, tunnels, and most other structures.

Advantages of the solution:

①Forms a Sealing Layer: It doesn't leak when torn apart, nor does it let water seep through when punctured.

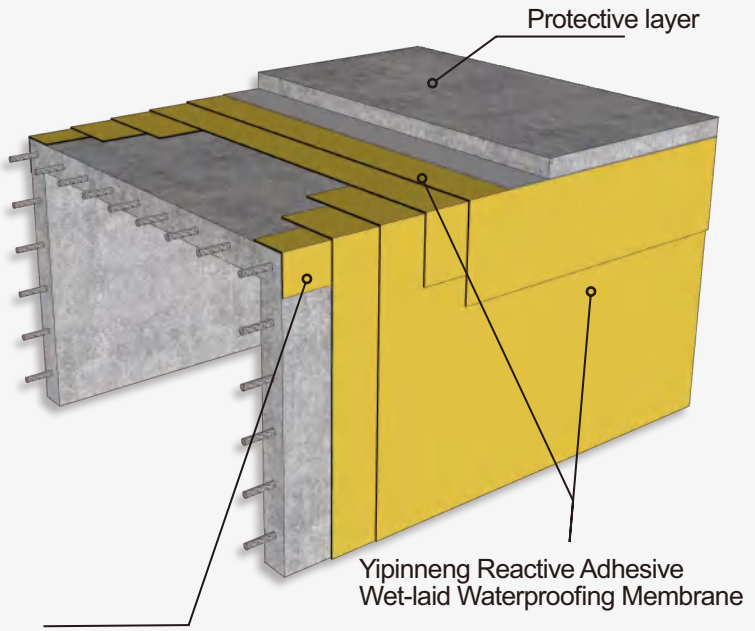
The product reacts and bonds with concrete to form a dense interfacial sealing layer. It bonds securely, ensuring waterproof safety and reliability—joints remain leakproof and damage won't cause water channeling even under 60-meter water pressure.

②All-Weather, All-Environment Application: Guaranteed Timelines, Safety & Eco-Friendliness

The base slab uses the loose-laying method; sidewalls, roof slabs, and rooftops use the wet-laying method. Mechanized spraying of cement slurry boosts efficiency, shortens construction time, and eliminates open flames or toxic gas emissions—ensuring safety and environmental protection.

③One Category Solves Waterproofing Challenges for All Concrete Building Parts: Full-Part Compatibility & Sealing

Yipinneng waterproofing membrane applies to all building areas. Unlike traditional solutions that use different materials for different parts (leading to incompatible materials, inconsistent processes, poor bonding, and leak-prone water channels at joints), this system ensures integrated sealing.



SOLUTION | One product for all building waterproofing needs

Waterproofing for basement floor slabs

Applicable to waterproofing for projects such as basement floor slabs, side walls with external waterproofing applied internally, tunnels constructed by mining method, etc.

Advantages of the solution:

①Smart Conformity & Shape-Adaptive Sealing: Ensures Effective Waterproofing

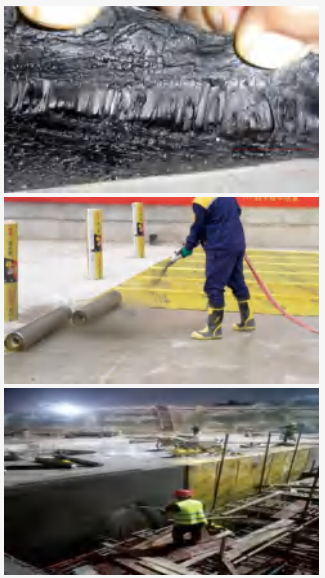
It has strong on-site adaptability. It is easy to apply on irregular parts such as internal and external corners, pits and grooves, and no hollowing will occur.

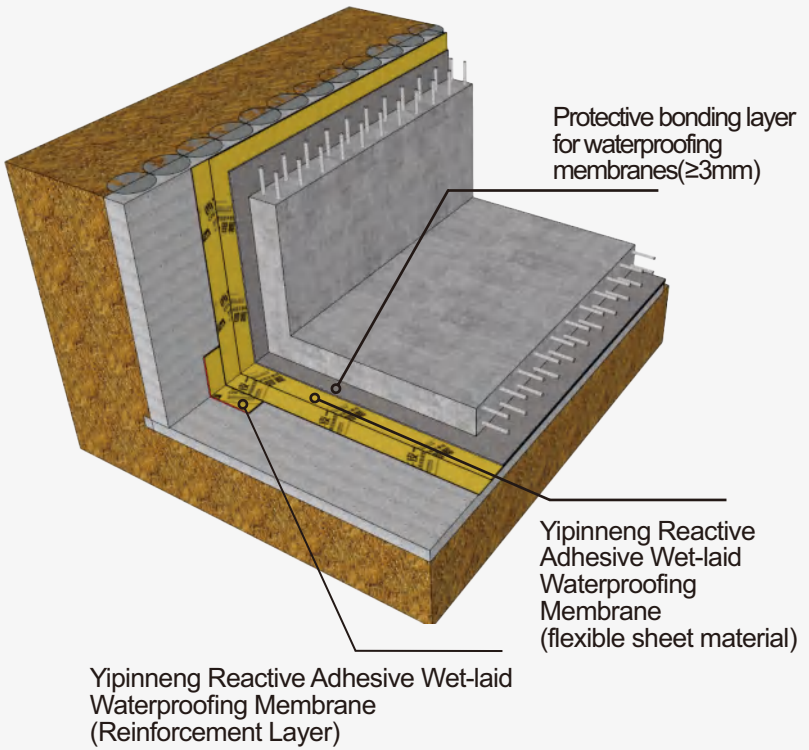
②Combined Protective Layer: Robust Defense, Combining Strength with Flexibility for Durable Safety

High strength and impact resistance effectively withstands damage from stepping, compression, and punctures. Resists contamination and blocks UV rays.

③Seamlessly Integrates with Yipinneng Wet-Laid Membrane on Sidewalls

Identical adhesive material ensures optimal compatibility and process consistency. Prevents chemical/physical damage, forming a comprehensive, fully sealed waterproofing layer to eliminate leaks system-wide.





SOLUTION | One product for all building waterproofing needs

Exposed roof waterproofing

Applicable to exposed waterproofing for non-trafficable roofs such as large workshops and residential roofs.

Advantages of the solution:

①Dual-Layer Protection: Effective Waterproofing, Insulation & Drainage.

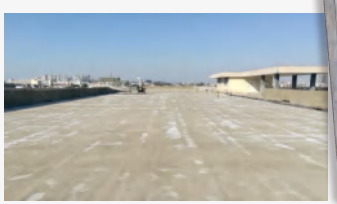
Layer 1: Installed on the roof structural slab (substrate), forming a sealed layer to prevent leaks and ensure structural safety.

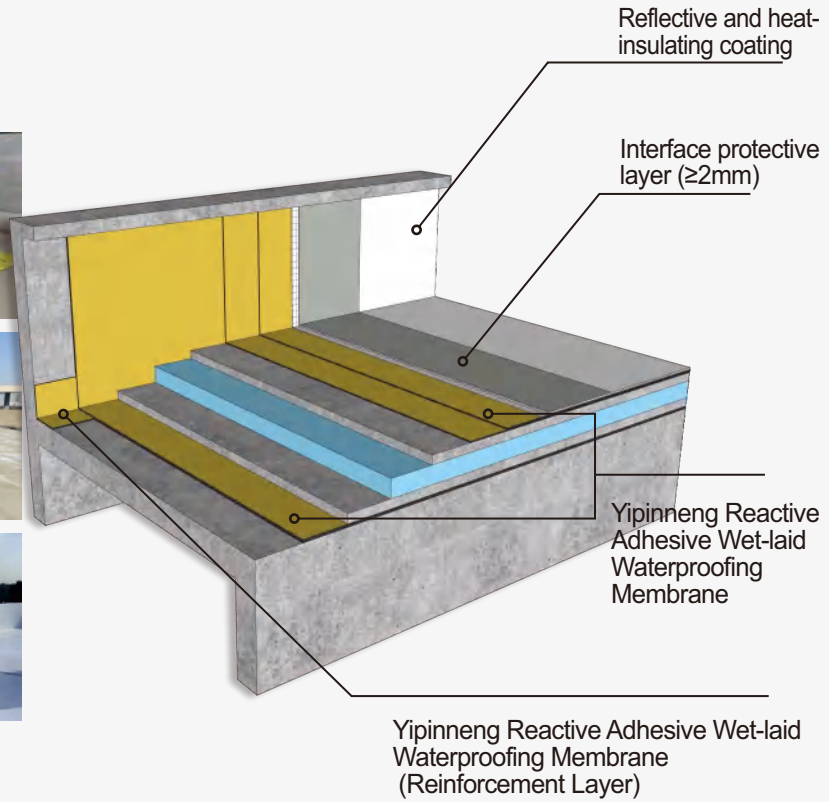
②Superior & Longer-Lasting Protection

A fiberglass mesh is laid over the membrane, topped with polymer-modified cement mortar as an exposed protective layer. This blocks UV aging and resists damage from stepping, compression, and punctures—extending service life by 5–10 years vs. traditional exposed organic waterproofing materials.

③Energy Saving, Safety & Eco-Friendliness

Coated with reflective thermal insulation paint (safe, environmentally friendly, and free of irritating odors), it resists UV/aging and withstands harsh weather, prolonging roof life. Reflects sunlight to significantly cool building rooftops, reducing energy consumption.





Everything starts from application and is accountable for the results.

The entire process of Yipinneng's Site Construction Applications complies with laws and regulations.

There are atlas for design, basis for testing, procedures for construction, and standards for acceptance.

I. The product standards and technical procedures of Yipinneng reach the international advanced level.

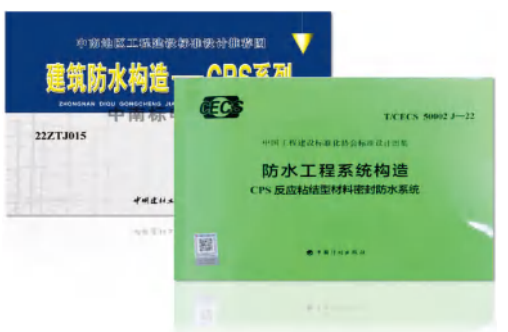
The four supporting group standards of Yipinneng have received unanimous praise from the review experts.
As evaluated by the review team of the China Association for Engineering Construction Standardization,
all of them have reached the international advanced level.

Product Type:	Product Name:	Product Standard:	Technical Specification:
Wet - laid Type	Yipinneng CPS - TS Reactive - Bonding Core - Shell Structure Heat - Press Cross - Linked Polymer Base Wet - laid Waterproofing Membrane	"Wet - laid Waterproofing Membrane with Core - Shell Structure Heat - Press Cross - Linked Polymer Base" T/CECS10173 - 2022	"Technical Specification for the Application of Wet - laid Waterproofing Membrane with Core - Shell Structure Heat - Press Cross - Linked Polymer Base" T/CECS 1019 - 2022
Pre - laid Type	Yipinneng CPS - TS Reactive - Bonding Core - Shell Structure Heat - Press Cross - Linked Polymer Base Pre - laid On - site - made Composite Waterproofing Membrane	"Pre - laid Composite Waterproofing Membrane" T/CECS10174 - 2022	"Technical Specification for the Application of Pre - laid Composite Waterproofing Membrane" T/CECS1020 - 2022

▼ **Product Standards and Technical Specifications**

▼ **Product Atlas**

The Standard Design Atlas of "CPS Reactive Bonding Material Sealing waterproofing System" is compiled by China Academy of Building Research Co., Ltd. and XI NIU PI Waterproofing Technology Co., Ltd., and approved by the China Association for Engineering Construction Standardization. This atlas is compiled based on the current national standards and meets the requirements of the new waterproofing regulations in GB55030 - 2022 "General Code for Building and Municipal Waterproofing".



Establish new standards for waterproofing applications and lead the development of waterproofing towards high - level quality.

Secondly, it is under the centralized management of CECS (China Association for Engineering Construction Standardization).
More than 30 well - known universities, design institutes and construction units serve as the chief editors and co - editors.

Centralized Management Unit: China Association for Engineering Construction Standardization

Abbreviated as CECS, it was established with the approval of the Ministry of Construction and registered with the approval of the Ministry of Civil Affairs. It is a non - profit social organization, and its business supervisor is the Ministry of Housing and Urban - Rural Development of the People's Republic of China. After more than 30 years of development, as of February 16, 2022, a total of 1,061 engineering construction standards and 172 product standards have been issued. Some of these standards have also been adopted by national and industry standards. It is a standard - setting organization with extensive influence.

Lead - compiling Unit: Guangzhou Quality Supervision and Testing Institute

Abbreviated as Guangzhou Quality Inspection Institute or GQT, it was founded in 1951. It is a research - based professional testing center integrating testing services, technological research and development, standard formulation and revision, and industry information exchange. It is a leading domestic and first - class international institution, and also the earliest established third - party comprehensive product quality supervision and inspection agency set up by the government in accordance with the law in China.

Lead - compiling Unit: XI NIU PI Waterproofing Technology Co., Ltd.

A Dual - demonstration Enterprise at the National Level: A National - level Technology Innovation Demonstration Enterprise (Document No. 304, Letter of the Department of Science and Technology, Ministry of Industry and Information Technology, 2022; Document No. 204, Ministry of Industry and Information Technology, 2019), and a National - level Intellectual Property Demonstration Enterprise (Document No. 160, Letter of the Department of Operation, National Intellectual Property Administration, 2022; Document No. 158, Letter of the Department of Management, National Intellectual Property Administration, 2018). It is specialized in the R & D, production, sales, and construction of concrete building sealing and waterproofing products. XI NIU PI waterproofing masters the core technology of concrete sealing and waterproofing. Its product technology has won two national honors: the China Patent Excellence Award (Document No. 63, Document of the Department of Management, National Intellectual Property Administration, 2014) and the National Key New Product (Document No. 303, Document of the Ministry of Science and Technology, 2014).

Participating Compiling Units: Tsinghua University, China Northwest Municipal Engineering Design & Research Institute, Guangxi Zhuang Autonomous Region Product Quality Inspection and Research Institute, China United Northwest Institute for Engineering Design & Research Co., Ltd., and more than 30 other institutions.

The state encourages social organizations to formulate and apply group standards to lead the progress of industries and enterprises.

Group standards have the same legal status as national standards and industry standards.

On November 4, 2017, the newly revised Standardization Law of the People's Republic of China was reviewed and passed by the Standing Committee of the National People's Congress, determining the legal status of group standards.

Standards include national standards, industry standards, local standards, group standards, and enterprise standards.

Article 18 The state encourages social organizations such as learned societies, associations, chambers of commerce, federations, and industrial technology alliances to coordinate with relevant market entities to jointly develop group standards that meet market and innovation needs. These standards shall be adopted as agreed upon by the members of the organization, or shall be made available for voluntary adoption by the society in accordance with the agreements of the members of the organization or the regulations of the organization.

Article 20 The state supports the use of independent innovation technologies to develop group standards and enterprise standards in important industries, strategic emerging industries, key common technologies, and other fields.

On March 11, 2015, the State Council issued the "Reform Plan for Deepening Standardization Work", which encourages the market to independently develop group standards. In terms of standard management, no administrative approval is set for group standards.

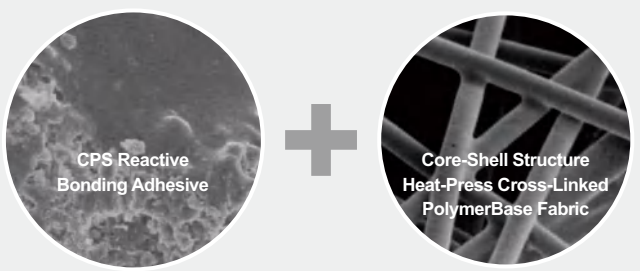
The state encourages the application of group standards.

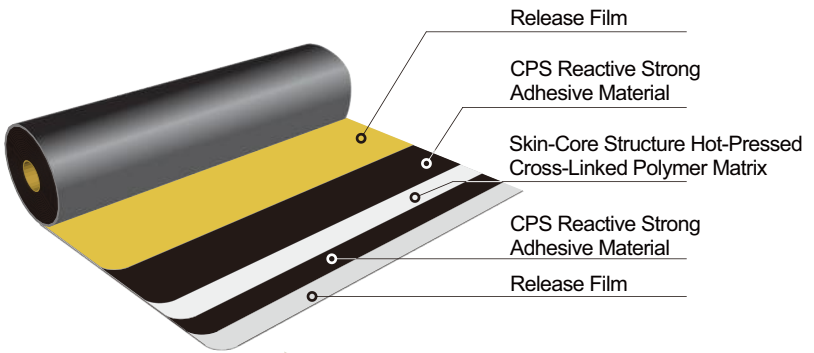
On January 18, 2019, the Standardization Administration of China and the Ministry of Civil Affairs issued the "Regulations on the Management of Group Standards", stating that all departments and localities are encouraged to apply group standards in the formulation of industrial policies, administrative management, government procurement, social management, inspection and testing, certification and accreditation, bidding and tendering, etc.

After the new Standardization Law came into effect on January 1, 2018, Shanghai, Beijing, Shenzhen and other places successively issued relevant documents and management systems based on the Standardization Law, encouraging government departments and various market entities to adopt group standards.

XINIUPI YIPINNENG
REACTIVE ADHESIVE WATERPROOFING MEMBRANE

CPS-TS Reactive Adhesive Type Skin-Core Structure Hot-Pressed Cross-Linked Polymer Matrix Wet-laid Waterproofing Membrane





Schematic Diagram of Yipinneng Wet-laid Type (Double-sided Adhesive) Structure

Yipinneng Reactive Adhesive Wet-laid waterproofing Membrane (i.e., Yipinneng CPS-TS Reactive Adhesive Type Skin-Core Structure Hot-Pressed Cross-Linked Polymer Matrix Wet-laid waterproofing Membrane) is a new type of sealing waterproofing material specially developed for the characteristics of domestic concrete building structures. One category of it can achieve the overall sealing waterproofing effect for all environments and all parts of concrete buildings.

It is composed of a skin-core structure hot-pressed cross-linked polymer matrix (hereinafter referred to as: skin-core structure strong reinforcement) and CPS Reactive Strong Adhesive Material.

◉ Main Physical Performance Indicators

S/N	Item		Technical Indicator
1	Tensile Performance	Tensile Force (N/50mm)	≥250
		Elongation at Maximum Tensile Force (%)	≥50
		Phenomenon during Tensile	No separation between the adhesive layer and the polymer matrix
2	Tear Force (N)		≥45
3	Heat Resistance (70°C, 2h)		No flowing, no dripping, slip ≤ 2mm
4	Low-Temperature Flexibility (-20°C)		No cracks
5	Water Impermeability (0.3MPa, 120min)		Waterproofing
6	Peel Strength at Lap Joints of Membranes (N/mm)	No treatment	≥1.0
		Water immersion treatment	≥0.8
		Heat treatment	≥0.8
7	Oil Permeability (number of sheets)		≤2
8	Adhesion Retention (min)		≥30
9	Peel Strength with Cement Mortar (N/mm)	No treatment	≥1.5
		Heat treatment	≥1.0
10	Peel Strength with Cement Mortar after Water Immersion (N/mm)		≥1.5
11	Thermal Aging (80°C, 168h)	Tensile Retention Rate (%)	≥90
		Elongation Retention Rate (%)	≥80
		Low-Temperature Flexibility (-18°C)	No cracks
12	Thermal Stability		No wrinkling, no flowing, the maximum curl of the polymer matrix edge does not exceed 1/4 of the side length
13	Water Channeling Resistance (0.6MPa/35mm)		No water seepage for 4h
14	Artificial Climate Accelerated Aging a (a The membrane used for non-exposed purposes does not require the determination of artificial climate accelerated aging)	Appearance	No blistering, no cracking, no delamination, no Adhesive, no holes
		Tensile Retention Rate (%)	≥80
		Elongation Retention Rate	≥80
		Low-Temperature Flexibility (-15°C)	No cracks

◉ Specifications and Models

Product Name	Model	Area
Yipinneng CPS-TS Reactive Adhesive Type Skin-Core Structure Hot-Pressed Cross-Linked Polymer Matrix Wet-laid waterproofing Membrane	1.5mm Double-sided Adhesive	20 m²
	2.0mm Double-sided Adhesive	15 m²

◉ Scope of Application

Suitable for waterproofing projects in:

• Industrial & civil buildings • Subways & tunnels • Underground utility tunnels

Applicable to exposed waterproofing layer construction on:

• New/renovated industrial & civil building roofs (non-trafficked) • Non-trafficked areas of extension/repair projects

◉ Application Method

It is suitable for waterproofing in construction and municipal engineering such as underground structures, roofs, interiors, and water-storage facilities.

◉ Transportation and Storage

1. During transportation and storage of Yipinneng reactive adhesive wet-laid waterproofing membrane, different types and specifications should be stacked separately and not mixed; avoid impact, extrusion, sun and rain. The storage temperature should be (5-35)℃, not higher than 45℃; when stored flat, the stacking height should not exceed 5 layers, and when stored upright, it should be stacked in a single layer.
2. During product transportation, prevent tilting or side pressure, and cover with tarpaulin if necessary.
3. Under normal transportation and storage conditions, the shelf life of Yipinneng Reactive Adhesive Wet-laid waterproofing Membrane is 12 months from the date of production.

◉ Application Advantages

Can achieve full-sealed waterproofing

Strong Adhesion, Long-Lasting Bond, Irreversible Bonding, and Sealed Waterproofing to Prevent Water Migration

Reactive bonding, " grow" with concrete
— Solving the Problems of Short Service Life of waterproofing Layer

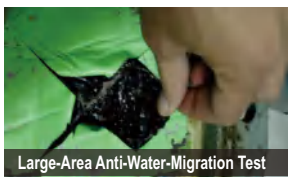
The waterproofing membranes adhere tightly to concrete or cement mortar substrates through the synergistic effect of physical interlocking and chemical cross-linking, forming a continuous and dense interfacial sealing layer. This bonding is irreversible; the waterproofing layer remains unaffected by thermal-humidity cycles, moisture swelling, and substrate movement, maintaining long-lasting adhesion. Thus, the waterproofing lifespan of the membrane is equivalent to that of the main structure layer.

Reactive waterproofing Membrane

Ordinary Products

No Water Leakage at Joints and No Water Channeling at Damages Under 60 Meters Water Pressure
—Solving the Problems of Unfirm and Non-Durable Adhesive of waterproofing Layer and Water Channeling

Testing Institution: Beijing Building Materials Inspection and Research Institute



Large-Area Anti-Water-Migration Test

Lap Edge Anti-Water-Migration Test

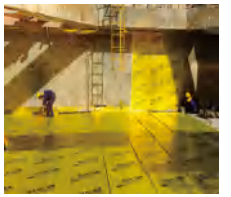
Under the test condition of 0.6MPa, the joints of CPS reactive adhesive membranes do not leak water, and there is no water channeling in large-area damages, so the waterproofing is safe and reliable.

Can be easier to apply

Can be applied in all positions, all environments, and all weather conditions

One product for floors, walls, and roofs.

It solves the quality problems and management difficulties caused by the incompatibility of two types of traditional materials and the chaos of three types.



Thin yet strong, flexible and crack-resistant, excellent conformity for easy application, and higher construction efficiency.

It solves the common problems of traditional materials, such as being stiff, non-adherent, and difficult to construct.

Adheres wet/dry, handles complex environments.

It adheres whether the surface is dry or wet, adapting to complex on-site environments.It solves the problem that traditional materials cannot be applied due to dampness, unevenness, or contamination of the substrate.

Can provide more long-term waterproofing

Lifecycle-Long Sealing, Long-Term Waterproofing, and Higher Cost-Effectiveness

The reactive adhesive forms a dual-stable structure with the carcass/substrate.

It interpenetrates and composites with the carcass, resulting in a stable structure that resists delamination and ensures a longer service life.

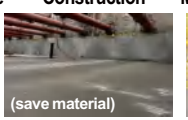
It interpenetrates and composites with the substrate, achieving a strong bond that prevents debonding and ensures durable waterproofing.

On-Site Composite, Rigorous Protection, Longer Service Life, and Better Comprehensive Cost Performance.

Long Lifespan + Simplified Structure + Quick Construction + Low Maintenance Cost = *High Cost-Performance Ratio*

(save labor)

Optimize the levelingcourse

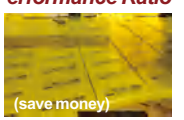


(save material)

Optimize the protective layer

(save time)

Optimize construction schedule



(save money)

Ultra-low repair rate

05

International Cooperation, Focused for 8 Years, and Joint Development

- Xiniupi Waterproofing, a National Double Demonstration Enterprise
- Technical cooperation with the scientific research team led by Professor Li Guangtao from Tsinghua University
- Joint innovation with the international enterprise Freudenberg Performance Materials Group from Germany

Focus on integration of professional wisdom, and forge the ability to create ultimate top - notch products.

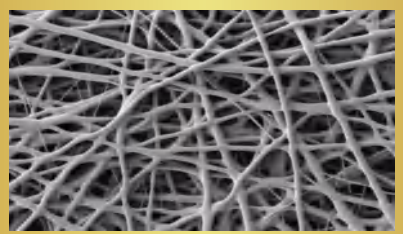
Joint development between international leading enterprises and prestigious universities.

Since 2015, we have been collaborating with the scientific research team led by Professor Li Guangtao from Tsinghua University. The joint research topic is "Interface Bonding Technology of Sealing and Waterproofing Materials for Concrete Buildings".

Xiniupi Waterproofing Technology Co., Ltd., a dual - demonstration enterprise at the national level, a national - level technology innovation demonstration enterprise, and a national - level intellectual property demonstration enterprise.

Freudenberg Performance Materials Group, a century - old enterprise and a global group company.

Since 2016, the two parties have maintained long - term cooperation and jointly studied "Core - Shell Structure Thermally - Press - Crosslinked Polymer Base Fabric".



NATIONAL DOUBLE DEMONSTRATION ENTERPRISE

MASTERING THE CORE TECHNOLOGY OF MODERN BUILDING WATERPROOFING AND PROTECTION

NATIONAL DEMONSTRATION ENTERPRISE FOR TECHNOLOGICAL INNOVATON

GONG XIN BU KE. [2019] NO. 204
GONG XIN BU GONG XIN TING KE HAN. [2022] NO. 304

National Technological Innovation Demonstration Enterprise refers to enterprises that have important demonstration and guiding roles in aspects such as R&D and innovation investment, innovation cooperation, innovation team building, technological innovation output and benefits. The acquisition of this award represents the high recognition of the company's innovation ability, innovation level and innovation performance at the national level!

NATIONAL INTELLECTUAL PROPERTY DEMONSTRATION ENTERPRISE

GUO ZHI FA GUAN HAN ZI. [2018] NO. 158
GUO ZHI FA YUN HAN ZI. [2022] NO. 160

National Intellectual Property Demonstration Enterprise is a key project carried out by the state to cultivate and form a group of demonstration enterprises with an intellectual property strategic management concept, comprehensive development of intellectual property creation, application, protection and management capabilities, outstanding comprehensive competitive advantages in intellectual property, and with industry influence and benchmarking.

XINIUPI WATERPROOFING TECHNOLOGY CO., LTD.

Xiniupi Waterproofing Technology Co., Ltd. is a rare National Double Demonstration Enterprise (National Demonstration Enterprise for Technological Innovation and National Intellectual Property Demonstration Enterprise) in China's building materials industry. It is a national key new product research and development and production base, a postdoctoral innovation practice base, and a leading enterprise in concrete building sealing and waterproofing in China. In 2017, it was rated as one of the top ten most influential brands in the waterproofing industry and became a high-quality supplier of waterproofing materials for national-wide government-runned public housing projects.

The company has focused on the field of modern building waterproofing and protection for more than 30 years, mastering the core technology of modern building waterproofing and protection. Its products and technologies have won two major national honors: the China Patent Excellence Award (GUO ZHI FA GUAN ZI. [2014] NO. 63) and the National Key New Product (GUO KE FA JI. [2014] NO. 303), and has been jointly and intensively promoted by four national ministries. It has edited and participated in more than 40 national, industry and regional standards, and its technology is in a leading position in the industry.

National Double Demonstration Enterprise

National Key New Product R&D and Production Base
Two major science and technology parks rooted in South China and serving the world

Centralized production, maintaining a high level of technology and quality
The world's largest R&D and production base of CPS waterproofing membranes and protective membranes

10 Warehousing Service Centers

90% of areas in China can receive goods within 24 hours

(Production centers are close to seaports for convenient service of the global market):Nanning, Qinzhou, Nanjing, Changchun, Shanghai, Tianjin, Urumqi, Xi'an, Chengdu, Wuhan

300 Xiniupi Modern Building Waterproofing and Protection Application Demonstration Bases

New technologies, new materials and knowledge popularization of modern waterproofing and protection

300 Professional Service Teams

300 Central Cities
More than 300 professional service teams

3000 Xiniupi Squads

Serve tens of thousands of Construction sites every year

Solve the "3 chaos" problems on the construction site through "militarization, mechanization and benchmarking of on-site management"

3000 Xiniupi Squad Service Vans

Serving the world, right beside you
Ready to provide professional waterproofing and protection construction guidance services for you at any time

TECHNICAL COOPERATION

WITH THE RESEARCH TEAM OF PROFESSOR LI GUANGTAO OF TSINGHUA UNIVERSITY

Research and development of core functional materials technology for Yipinneng

Cooperative project between Xiniupi Waterproofing Technology Co., Ltd. and the scientific research team led by Professor Li Guangtao from Tsinghua University: "Interface Bonding Technology of Sealing and Waterproofing Materials for Concrete Buildings

Core Technology of CPS Reactive Adhesive

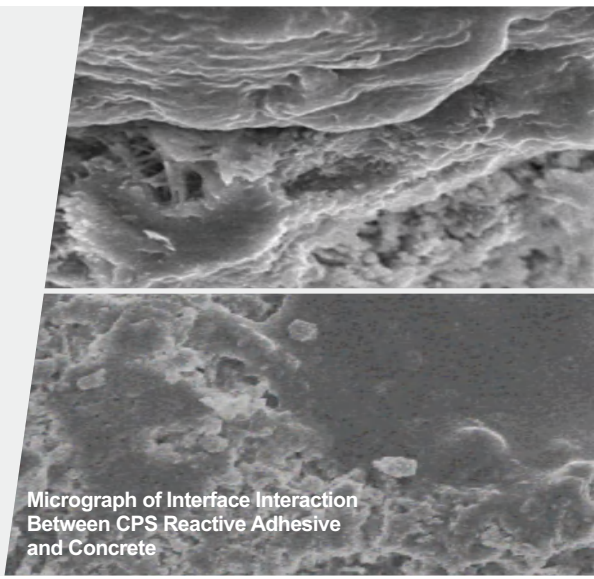
The CPS reactive adhesive has made a domestic breakthrough in the interface technology that enables the synergistic bonding of chemical cross - linking and physical mortise - and - tenon effects between the rubber compound for waterproofing rolls and cement concrete. It has obtained a national invention patent and won the China Patent Excellence Award in 2014.

Application Advantages of CPS Reactive Adhesive

Powerful Adhesion: It not only has the mortise - and - tenon effect of physical adsorption but can also generate chemical bonding force at the mortise - and - tenon parts of the deep substrate. The superposition of the mortise - and - tenon effect and the chemical bonding force enables the formation of an anti - water - channeling interface sealing layer between the waterproofing layer and the base surface, thus putting an end to the problem of water - channeling and leakage in the waterproofing layer.

Persistent Bonding: Due to the effect of chemical bond energy, neither the mechanical forces during the use of the waterproofing layer nor the erosion of media in the application environment can cause a decline in the bonding strength of the bonded surface. This ensures the long - term durability of the waterproofing layer application.

Reliable Seam Joint: Thanks to the breakthrough in reactive bonding technology, the waterproofing rolls can be wet - laid and overlapped during construction. This makes the application of the waterproofing layer more convenient and reduces potential technological risks. As a result, the waterproofing effect at the weak seam joint areas is reliably guaranteed.



Micrograph of Interface Interaction Between CPS Reactive Adhesive and Concrete

Li Guangtao

Professor and doctoral supervisor of Tsinghua University
Outstanding Youth of the National Natural Science Foundation
Outstanding Youth of the National Natural Science Foundation

Chief scientist of Xiniupi Waterproof 311 Research Institute

COOPERATION

A POWERFUL PARTNERSHIP BETWEEN STRONG ENTITIES
311 WATERPROOFING RESEARCH INSTITUTE, POST - DOCTORAL INNOVATION PRACTICE BASE

The 311 waterproofing Research Institute was jointly established by Xiniupi Waterproofing Technology Co., Ltd. and the scientific research team led by Professor Guangtao from Tsinghua University. Focusing on the field of concrete sealing and waterproofing, the first post - doctoral innovation practice base for concrete sealing and waterproofing in China is located here.

Guided by the goal of solving practical problems, the 311 waterproofing Research Institute focuses on the research and development of interface bonding, sealing, and waterproofing technologies. It has invented and created three high - quality waterproofing products, achieving a breakthrough in full - sealing waterproofing technology.

COOPERATION

COLLABORATION BETWEEN POWERHOUSES

Professor Guo Yong, Deputy Secretary of the Party Committee of Tsinghua University, conducted an inspection and provided guidance on work.

He highly commended the achievements of the technical cooperation between Professor Li Guangtao's team and Xiniupi Waterproofing Technology Co., Ltd.

On August 23, 2021, Professor Guo Yong (seventh from the left) and his entourage visited Xiniupi Waterproofing Technology Co., Ltd. for research and guidance.

Professor Guo Yong (first from the right) highly commended the achievements of the technical cooperation between Professor Li Guangtao's team and Xiniupi.

Professor Li Guangtao from Tsinghua University led teams to visit the Xiniupi Science Park several times for technical guidance and tackling research topics.

COOPERATION

EIGHT YEARS OF FOCUS YIELD FRUITFUL RESULTS

The subject exchange meeting on CPS reactive adhesion research between Xiniupi Waterproofing Technology Co., Ltd. and Professor Li Guangtao's research group was held in He Tian Building, Tsinghua University.

Xiniupi Waterproofing Technology Co., Ltd. and the scientific research team led by Professor Li Guangtao from Tsinghua University carried out technical exchanges at Tsinghua University.

The two sides had in - depth discussions and exchanges on the core functional rubber compound technology of Yipinneng.

COLLABORATE WITH FREUDENBERG PERFORMANCE

MATERIALS GROUP, AN INTERNATIONAL ENTERPRISE FROM GERMANY, TO INNOVATE JOINTLY.

Research and development of Yipinneng core functional material technology. Cooperative project between Xiniupi Waterproofing Technology Co., Ltd. and Freudenberg Performance Materials Group from Germany: "Core - Shell Structure Thermally - Press - Crosslinked Polymer Base Fabric"

Core Technology of Core - Shell Structure Thermally - Press - Crosslinked Polymer Base Fabric

The core - shell structure thermally - press - crosslinked polymer base fabric is the "reinforcement" and "skeleton" of Xiniupi Yipinneng CPS - TS waterproofing rolls. It is developed by Freudenberg Performance Materials Group and Xiniupi Waterproofing Technology Co., Ltd. The base fabric has a uniformly thick shell layer and a core layer with a consistent diameter. The "shell" and "core" jointly bear the load and disperse stress, preventing separation, cracking, and breakage. It exhibits superior mechanical properties, better integration of spun - base fibers, and enhanced comprehensive application performance.

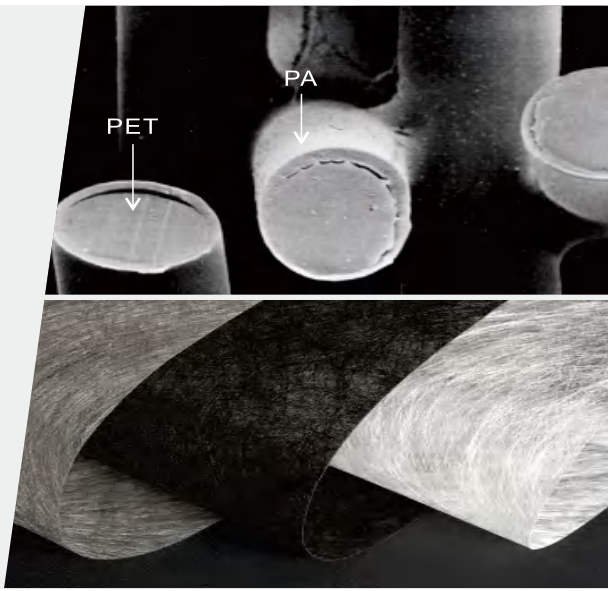
Application Advantages of Core - Shell Structure Thermally - Press - Crosslinked Polymer Base Fabric

The main technical advantages of the core - shell structure thermally - press - crosslinked polymer base fabric compared with traditional polyester base fabric are as follows:

It has more excellent mechanical properties. By integrating the performance characteristics of various materials, it has better strength, and an advantage in mechanical matching of extensibility. Its good extensibility and strength enable it to adapt to various deformation movements during Site Construction Applications without being damaged.

On the premise of ensuring better application performance, the base fabric is made thinner, more compliant, and easier to construct, install, and lay. Its good mechanical properties and dimensional stability ensure that during the Site Construction Application process, it will not become hollow, bulge, warp, or crack.

The base fabric is formed by spun - bonding, hot - pressing, and cross - linking with a uniform grid, enabling it to be fully impregnated and integrated with the rubber compound. This avoids quality problems such as water absorption, expansion, delamination of the base fabric due to incomplete encapsulation by the rubber compound, and mildew of the base fabric.



COOPERATION

COLLABORATION BETWEEN POWERHOUSES FREUDENBERG PERFORMANCE MATERIALS GROUP (LUBRON GMBH) XINIUPI WATERPROOFING TECHNOLOGY CO., LTD.

Joint development of Yipinneng with an international leading enterprise

Xiniupi Waterproofing Technology Co., Ltd. has reached a strategic cooperation with Freudenberg Performance Materials Group from Germany.

COOPERATION

COLLABORATION BETWEEN POWERFUL PARTIES. FREUDENBERG, A CENTURY - OLD GERMAN ENTERPRISE.

A benchmark for high - performance material technology innovation. Xiniupi Waterproofing Technology Co., Ltd. joins hands with Freudenberg Performance Materials Group from Germany for innovation.

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Freudenberg Performance Materials is a globally leading manufacturer of innovative technology products, serving a wide range of markets. Its products are mainly applied in sectors such as automotive, building materials, energy, leather products, and special products. It has 23 production bases in 13 countries around the world. In 2021, the amount of reinforced carcass materials used for high - carbon waterproofing globally exceeded 500 million square meters.

I'm delighted to have reached a cooperation with Xiniupi Waterproofing Technology Co., Ltd. I'm also looking forward to completing more new projects together with Xiniupi.

Dr.Frank Heislitz
CEO of Freudenberg
Performance Materials

Freudenberg is a global technology group with a history of over 170 years. Xiniupi and Freudenberg share the same concepts: innovation and stable quality. We consider Xiniupi to be an excellent partner.

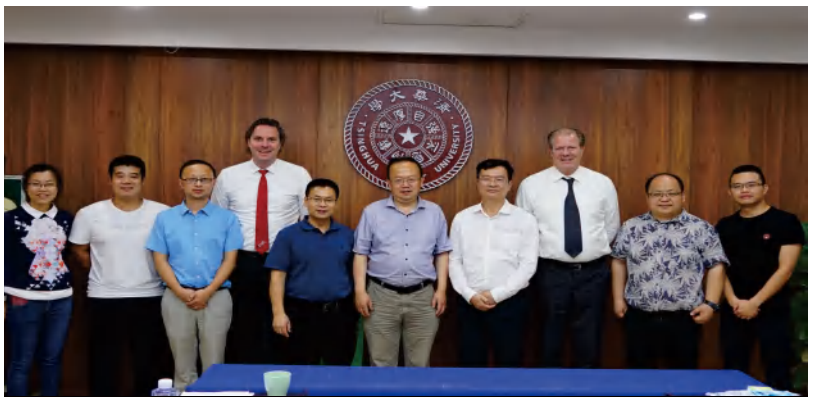
Bettina Schoen
Vice Chair of the European Union Chamber of Commerce in China
Chair of the Shanghai Chapter
Freudenberg's Asia Representative

COOPERATION

A MODEL OF INTERNATIONAL COOPERATION AND A BENCHMARK OF IN - DEPTH INNOVATION

Xiniupi Waterproofing Technology Co., Ltd. joins hands with Freudenberg Performance Materials for innovation.

In 2016, Freudenberg Performance Materials and Xiniupi Waterproofing Technology Co., Ltd. entered into a strategic cooperation to jointly develop new high - performance waterproofing products.



In March 2019, the conclusion meeting of the research project jointly conducted by Xiniupi Waterproofing Technology Co., Ltd., the scientific research team led by Professor Li Guangtao from Tsinghua University, and Freudenberg Performance Materials was held at Tsinghua University.

In August 2020, Ms. Bettina Schoen (third from the right), then Vice Chair of the European Union Chamber of Commerce in China and Chair of its Shanghai Chapter, as well as the Asia Representative of Freudenberg, participated in the ribbon - cutting ceremony of the new products jointly developed with Xiniupi Waterproofing Technology Co., Ltd.

In March 2018, to support the new products resulting from the three - party cooperation, the launch of these new products attracted extensive attention from all sectors of society.

In 2018, the technical team from Freudenberg Performance Materials visited Xiniupi Waterproofing Technology Co., Ltd. for technical exchanges.

IMPORTANT NOTICE:

The data and situations listed in this product brochure are the test results of the company. When using this product, there may be discrepancies between the actual situations and the test data and situations due to different actual conditions. The data and content published in this brochure are for reference only and do not serve as guarantees. In special cases, the explanations provided by the company shall prevail. Meanwhile, the company does not guarantee that the materials, reports and related descriptions from time to time provided are complete, timely, accurate or fit for any particular purposes of the customers. Xiniupi Waterproofing Technology Co., Ltd. reserves the final right to interpret the content of this brochure.

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