

# Hi-TurfShield Introduction

Next-generation artificial turf hybrid rooftop waterproofing system  
verified by patented technology



Patent No. 10-2929004 (Waterproofing structure using artificial turf)

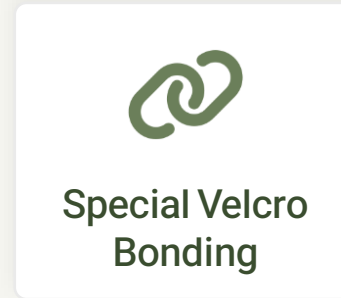


Green Technology Certification

# Hi-TurfShield (Artificial Turf Hybrid Waterproofing Sheet) Product Structure



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Jointly Developed and Verified by



코오롱글로벌(주)



# Core Patented Technology of Hi-TurfShield Solution



## Patent No. 10-2929004

Hybrid non-exposed modified asphalt waterproofing system combining artificial turf and Velcro



### Modified Asphalt Sheet

KS F 4917 Class A standard  
Forms a perfect primary waterproofing layer  
Secures long-term durability



### Special Velcro Bonding

Proprietary fastener technology  
Enables quick attachment and detachment during installation  
Maximizes ease of partial repair



### Eco-friendly Artificial Turf

KS F 3888-1 B-3 standard  
Completely blocks UV rays from the sheet  
Heat-shielding and aesthetic improvement effects

Jointly Developed and Verified by



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# Detailed Structure of Hi-TurfShield Solution's 4-Layer Material System



④ Eco-friendly Artificial Turf

## ④ Eco-friendly Artificial Turf [KS F 3888-1 B-3]

Located on the top layer, it provides UV protection and a rooftop heat-shielding effect (up to 1.8°C). By applying a patented Velcro bonding method, partial repair and detachment are highly accessible, enabling the creation of a multi-purpose rest area.



③ Urethane Sealant

## ③ Urethane Sealant

It perfectly seals leak-vulnerable areas such as the seams (joints) between asphalt sheets, parapet upstands, and pipe penetrations. It completely prevents secondary leaks and maximizes the watertightness of the entire waterproofing system.



② Modified Asphalt Sheet

## ② Modified Asphalt Sheet [KS F 4917 Class A 3.0mm]

As the core primary waterproofing layer of the system, it blends SBS rubber modifiers to ensure low-temperature flexibility during severe winters and long-term durability (over 10 years). It prevents rupture with excellent elongation even when crack behavior occurs on the substrate.



① Urethane Primer

## ① Urethane Primer

It fills the micro-pores of the existing concrete substrate and increases surface strength. It is a foundational adhesive layer that prevents lifting by inducing strong chemical and physical integration behavior with the subsequent waterproofing sheet. (Uses KP Urethane)

Existing concrete substrate

# Hi-TurfShield Color Options and Application Spaces




## Signature Green

-  Recommended Use: Rooftop gardens, relaxation/leisure spaces, and sites requiring eco-friendly design.



## Premium Pattern Gray

-  Recommended Use: High-end commercial facilities, modern residential complexes, and sites requiring a simple exterior.

Color Category	Visual Characteristics	Functional Characteristics (Reflectance, etc.)	Main Proposed Application Target
Signature Green	Eco-friendly, provides a sense of stability	High solar reflectance, excellent heat-shielding performance	Complexes aiming for eco-friendly certification, specialized community apartment rooftops
Premium Pattern Gray	Modern, simple, sophisticated	Prevents light glare, excellent stain-hiding power	Premium office buildings, design-specialized commercial facilities

# Hi-TurfShield Product Specifications and Overwhelming Performance

## Core Product Specifications (KS Certification)

### LAYER 2

#### Special Modified Asphalt Waterproofing Sheet

- ✓ KS F 4917 Class A Standard (Thickness 3.0mm)
- ✓ Material maximizing tensile and tear performance

### LAYER 4

#### High-performance Eco-friendly Artificial Turf

- ✓ Meets KS F 3888-1 Type B-3 standards
- ✓ Hybrid weaving combined with Velcro fabric

## Key Performance Data (Verified Technology)

### Heat-Shield Effect

Up to **35.24°F** reduction

(Surface temperature reduction through direct sunlight blocking)



### Long-term Durability Life

Guaranteed for over **10 years**

(Completely blocks UV degradation compared to exposed waterproofing)



### Cooling Energy Savings Rate

Average **11.7%** savings

(Proven effect of blocking radiant heat on the top floor of buildings)



### International Quality Standard Compliance

Meets **FIFA standards**

(Verified wear resistance equivalent to sports facilities)



## Green Technology Certification

As a low-carbon, eco-friendly construction method that perfectly aligns with the ESG management vision, it achieves zero harmful substance emissions.

# End of Document

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