

Qingdao Achieving Honeycomb Panel Co., Ltd.

青 岛 智 新 成 复 合 板 材 有 限 公 司

www.cnhoneycomb.com

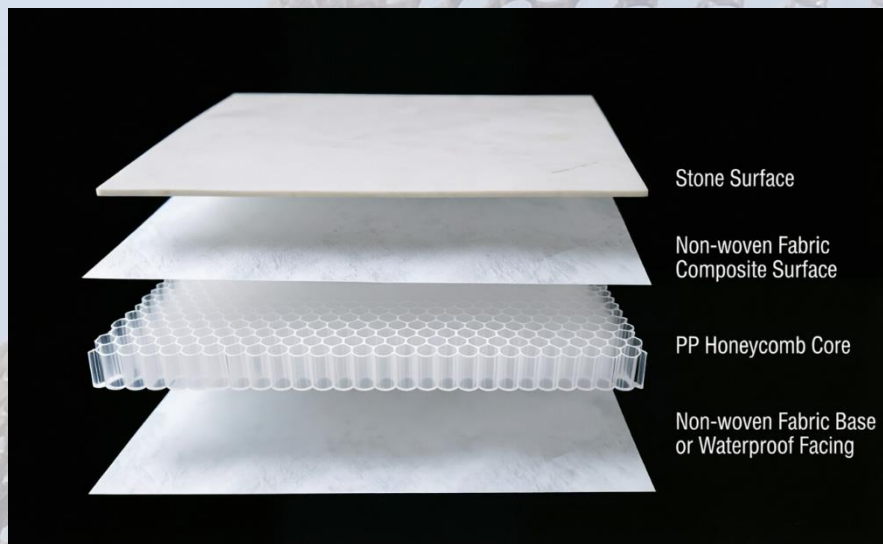
info@cnhoneycomb.com / WhatsApp: +86 13361200367

Premium PP Honeycomb Substrate for Marble & Stone Reinforcement

The high-performance, moisture-proof alternative to plywood and MDF for high-end countertops and wall claddings.

- **Product Overview**

Our PP (Polypropylene) Honeycomb Stone Structural Substrate is an engineered, lightweight reinforcement backing designed specifically for thin stone slabs, fragile marble, and sintered stone. It seamlessly integrates into the stone fabrication process, replacing heavy, rot-prone wood substrates to deliver unmatched structural integrity.



- **Key Applications & Advantages**

Integrated Reinforcement for Thin Slabs

Not just a backing, but a core structural component. It provides a rock-solid foundation for ultra-thin stone slabs (12mm or less), drastically reducing crack risks during processing and transportation.

Engineered Weight Reduction (60% - 70%)

Reduces the dead load of architectural structures significantly compared to solid stone slabs. It enables massive, monolithic stone installations (like large villa wall panels) while lowering shipping costs and streamlining on-site handling.

Technical solution engineered by R&D Department
at Qingdao Achieving Honeycomb Co., Ltd. 2026.

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Zero-Deflection Support for Long Spans

Engineered with high flexural rigidity to eliminate bowing, sagging, or warping. Ideal for long-span kitchen islands, floating vanities, and cantilevered countertops.

80%+ Impact Dispersion Layer

The multi-axial honeycomb geometric structure absorbs and disperses over 80% of localized impact energy. This effectively prevents "spider-web" cracking and structural failure under heavy daily use or accidental drops.

High-Bond Mechanical Interlocking (Non-Woven Interface)

Pre-laminated with a thermally fused non-woven fabric surface. It creates a superior mechanical key for epoxy resins and stone adhesives used by fabricators, ensuring a permanent, delamination-proof bond.

100% Waterproof & Rot-Proof Barrier

Unlike marine-grade plywood or MDF, our PP honeycomb core is completely hydrophobic. It eliminates mold growth, swelling, and unpleasant odors in high-humidity areas like luxury bathrooms, kitchens, and outdoor facades.

Acoustic Insulation & Premium Solid Feel

The internal air-cell matrix acts as a natural acoustic dampener. It minimizes hollow clicking sounds, reduces impact noise, and gives the stone surface a premium, solid tactile feel.

Sustainable & Fire-Resistant Safety

Made from 100% brand new high-performance polypropylene and it can be Recycle. It meets green building standards and global safety compliance certifications.



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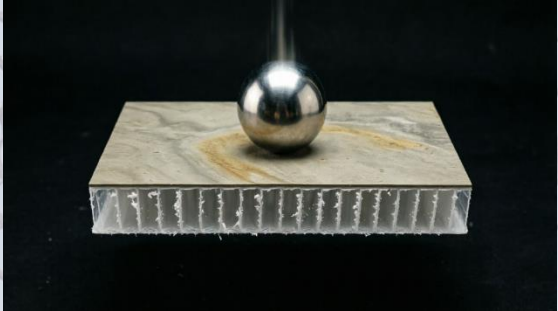
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• Competitor Comparison Matrix

Engineering Properties	PP Honeycomb Reinforcement Substrate	Traditional Marine Plywood / MDF
Moisture Resistance	100% Waterproof & Hydrophobic (Zero water absorption, completely rot-proof)	Poor (Absorbs moisture, leading to swelling, warping, and mold growth)
Weight Optimization	Ultra-Lightweight (Reduces stone slab dead load by 60% - 70%; slashes shipping costs)	Heavy (Increases architectural load, logistics costs, and on-site handling difficulty)
Impact & Crack Prevention	Excellent (80%+ Energy Absorption) (Multi-axial core prevents spider-web cracking and edge chipping)	Limited (Uneven support surface often leads to structural failure under heavy impact)
Long-Span Deflection	Zero-Deflection Support (High flexural rigidity eliminates sagging or bowing on long islands)	High Risk (Prone to sagging and creeping over time under the heavy weight of stone)
Delamination Risk	Permanent Mechanical Bond (Thermally integrated non-woven layer locks with stone epoxies)	High Risk (Wood glues degrade in humid conditions, causing hollow sounds or debonding)
Environmental Compliance	100% Recyclable Polypropylene (Eco-friendly, VOC-free, complies with Green Building standards)	Restricted (May contain formaldehyde binders; prohibited in strict eco-audits)



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- **Fabricator & Industrial Compatibility**

Adhesive Compatibility: Optimized for standard Stone Epoxy, Polyester Adhesives, and Polyurethane (PU) glues.

Tooling: Can be easily cut and grooved using standard CNC bridge saws, waterjets, and handheld stone cutting tools.

Certifications: Complies with global building material safety, low-VOC emissions, and green building environmental standards.



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Polypropylene Honeycomb “P8T40” Non woven

SPECIFICATION			
Dimensions	standard : 1220 x 2440 mm	export : 1150 x 2300 mm	
Thickness	5-100mm or customized		
Cell size	8mm		
Density without facing	80kg/m ²		
Color	white		
Coating	nature	weight	
Non-woven	Polyester	40g/m ²	
Possible process	RTM, closed moulds		
CHARACTERISTICS			
Properties	Test method	PP8T40	
Flatwise tensile 	ASTM C 297	Typical Strength psi/Mpa	130/0.89
Bare compression 	ASTM C 365	Typical Strength psi/Mpa	275/1.89
		Typical Modulus ksi/Mpa	11.5/79.2
Plate Shear 	ASTM C 273	Typical Strength psi/Mpa	85/0.58
		Typical Modulus ksi/Mpa	2.2/15.2
Water resistance,% retention of shear strength - 20°C	ASTM C393	±100%**	
Heat resistance for honeycombs core THK 20mm	R=0.3m ² .°C/W (soitλ=0.067W/(m.°C)		
Heat resistance for honeycombs core THK 90mm	R=0.6m ² .°C/W (soitλ=0.014W/(m.°C)		
Behaviour with fire	Standard quality inflammable, Possibility of M1/F0 classification for finished sandwich panels, depending on the sandwich skin		
Chemical Properties	Excellent resistance to water and most acids, bases and salt solutions		
Resistance to Ultraviolet rays(U.V.)	The longevity for the core's storage is guaranteed by a anti U.V.-U.V. protection of the finished panel is ensured by the skins of the sandwich panel		
Shocks resistance	Increased by the use of pp honeycomb		

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