RiverRecycle

RiverRecycle BOARDS

Build With Purpose

100% recycled plastic boards

FROM WASTE TO WORTH

Transforming Plastic Pollution into Sustainable Solutions

The Plastic Crisis

Rivers carry over 80% of ocean-bound plastic waste, often becoming dumping grounds in regions with limited waste management. This pollution threatens the health and livelihoods of people who rely on these waterways for drinking, fishing, and farming.

Turning Waste into Opportunity

Financial incentives drive real change. By creating jobs in waste collection, recycling, and board production, we empower communities to clean their rivers while generating lasting value—transforming pollution into opportunity.

Impact Beyond Products

RiverRecycle Boards offer sustainability without compromising quality or increasing costs. Durable and high-performance, they help clean waterways, support communities, and advance the circular economy—seamlessly integrating sustainability into any project.

BUILD WITH PURPOSE

Choose Sustainable Innovation

RiverRecycle Board is a high-performance surface material **made from 100% recycled low-value plastic waste,** including multi-layer packaging (MLP), plastic bags, and wrappers—materials that are notoriously difficult to recycle and often end up polluting the environment. Through an advanced hot-pressing process, we transform this undervalued resource into a **strong, durable, water-resistant, and mold-resistant** material that is fully recyclable at the end of its life.

Designed for versatility, RiverRecycle Boards offer many advantages over standard wood or composite materials. They can be c**ut, screwed, and nailed like wood-based boards, welded like PVC or HDPE, formed like metal or cardboard, and coated like cement-based boards**. Businesses can seamlessly integrate them into projects, benefiting from a cost-effective, sustainable alternative that delivers high performance while advancing the circular economy.

Strong and durable

Tailored solutions for various degrees of strength, hardness, and flexibility.

Weatherproof

Great for outdoor use in humid conditions or heavy, constant rain.

Anti-mold

The non-decomposing polymer base averts mold and bacteria growth.

Easy to clean

They can be wiped and rinsed with ease without the need for special equipment or cleanser.

100% Recycled Material

Composed of plastic waste removed from the environment. Created to last, recycled at the end of their life.

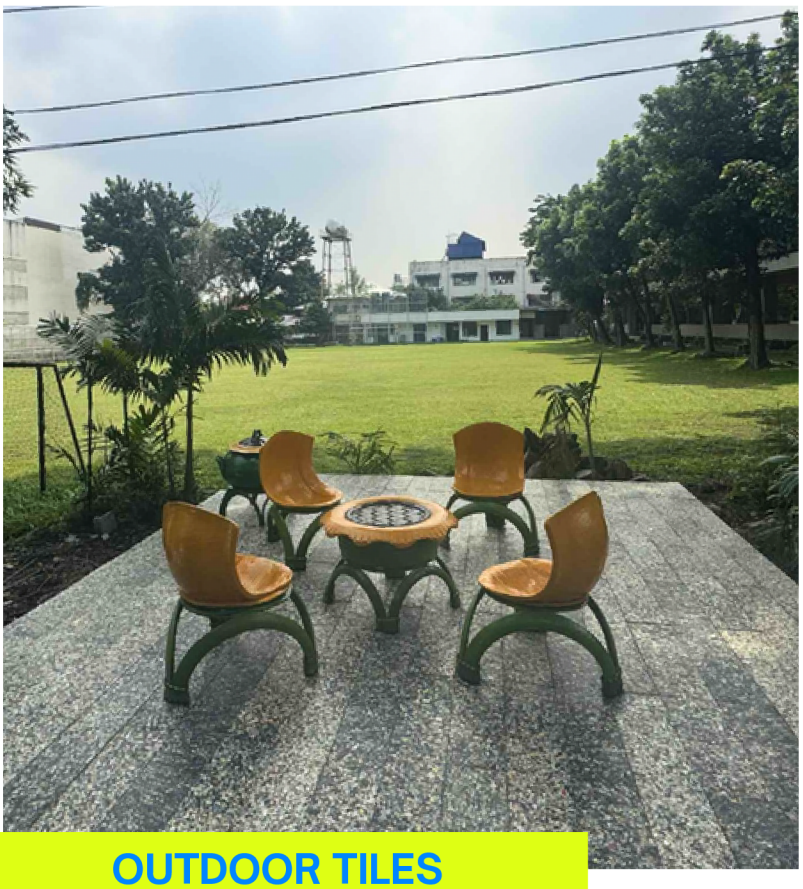
Child labor free

We have strict child protection policies to prevent children from being involved in our supply chain

Non-toxic

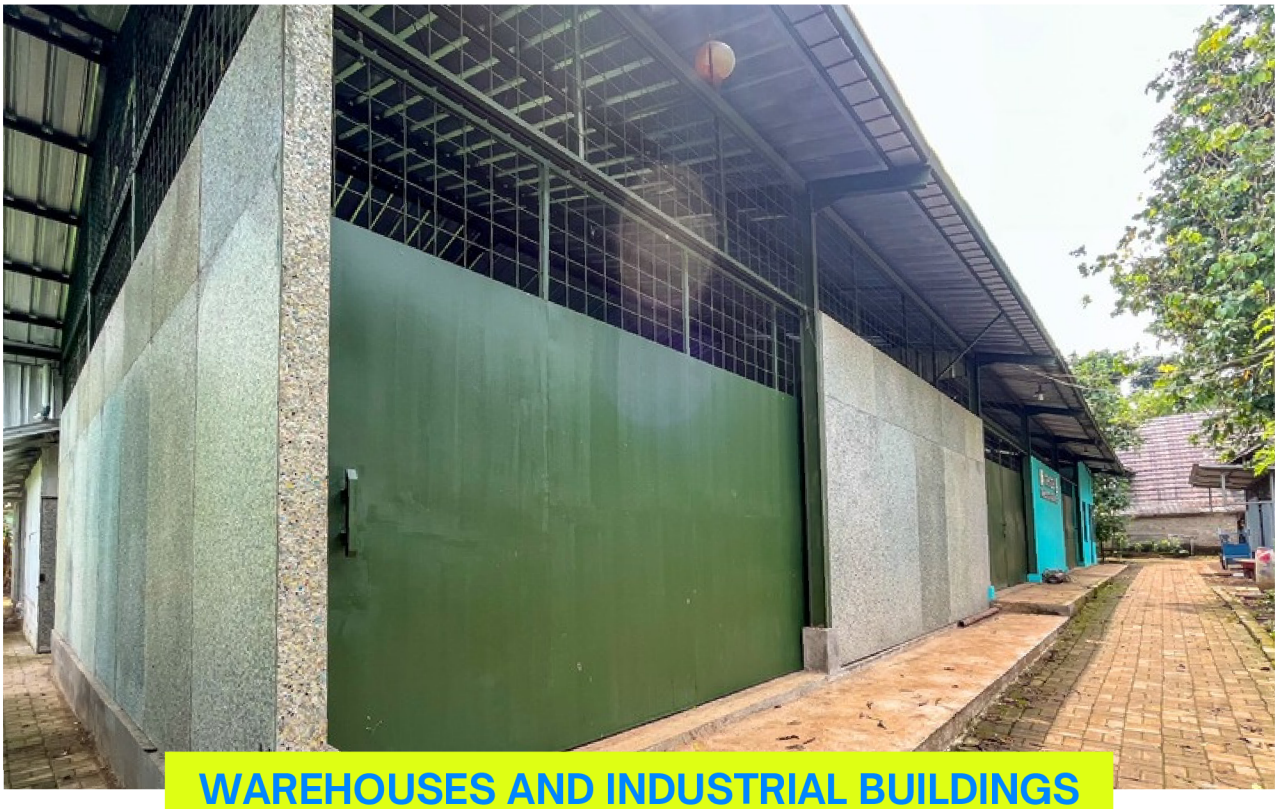
Careful collection, segregation, washing and heat treatment processes, results in non-toxic and safe properties.

APPLICATIONS



OUTDOOR TILES

FORMWORK



WAREHOUSES AND INDUSTRIAL BUILDINGS

COMMUNITY BUILDINGS

FURNITURE

STAIRS

SHELVES

BOARD PROPERTIES

MATERIAL PHYSICAL PROPERTIES

PARAMETER	REFERENCE	UNIT	NILAI
Density	ASTM D792-20	g/cm^3	1.053
Specific Gravity	ASTM D792-20	-	1.057
Water Absorption	ASTM D570-22	%	0.15
Surface Hardness (Shore D)	ISO 868:2003	HD	67.9
Tensile Test:			
• Tensile Strength	ASTM D638-14	MPa	9.5947
• Elastic Modulus		MPa	199.74
• Tensile Strain		%	6.32
Bending Test:			
• Flexural Strength	ASTM D790-17	MPa	17.001
• Elastic Modulus		MPa	16.093
• Flexural Strain		%	1.8673
Compressive Test:			
• Compressive Strength	ASTM D695	MPa	18.691
• Elastic Modulus		MPa	378.34
• Compressive Strain		%	6.8136
Screw Withdrawal	ASTM D6117	N	463.76
Screw / Nail Holding Power	ASTM D1037	N	395.52
Impact Strength	ASTM D256-10	J/m	642.06
Heat Distortion Temperature	ASTM D648-16	°C	57.5
Flammability	UL 94	-	HB Rated - Self-Extinguishing; VB-Not Rated
Airborne Sound Insulation (STC)	ISO 10140, ASTM E90-97	dB	31

Tests performed by SUCOFINDO (2025); Metallurgy and Materials Engineering Laboratory, Faculty of Mechanical and Aerospace Engineering, Bandung Institute of Technology (2025); Laboratory of National Measurement Standards SNSU–BSN (2025); and DOST Industrial Technology Development Institute (2024)

DIMENSIONS	THICKNESS	WEIGHT
1200mm x 2400mm	10mm	~28kg
	12mm	~32kg
	16mm	~44kg

Please note that there is a tolerance of ± 1mm in the thickness of each board, influencing the weight as well.

CHEMICAL & ENVIRONMENTAL SAFETY

PARAMETER	REFERENCE	UNIT	NILAI
Heavy Metals:			
• Lead (Pb)	IEC 62321	mg/kg	n.d (PASS)
• Cadmium (Cd)		mg/kg	n.d (PASS)
• Chromium Hexavalent (Cr6+)		mg/kg	n.d (PASS)
• Mercury (Hg)		mg/kg	n.d (PASS)
Phthalates:			
DEHP (Di(2-Ethylhexyl)-Phthalate)	IEC 62321	mg/kg	27 (PASS)
DBP (Dibutylphthalate)		mg/kg	n.d (PASS)
BBP (Butylbenzylphthalate)		mg/kg	n.d (PASS)
DiBP (Diisobutyl Phthalate)		mg/kg	n.d (PASS)
Note: n.d = not detectable			

Tests performed 2025 by SUCOFINDO

With their distinctive speckled design, RiverRecycle Boards embody innovation and a shared commitment to a cleaner, more sustainable future.

RIVERRECYCLE BOARDS

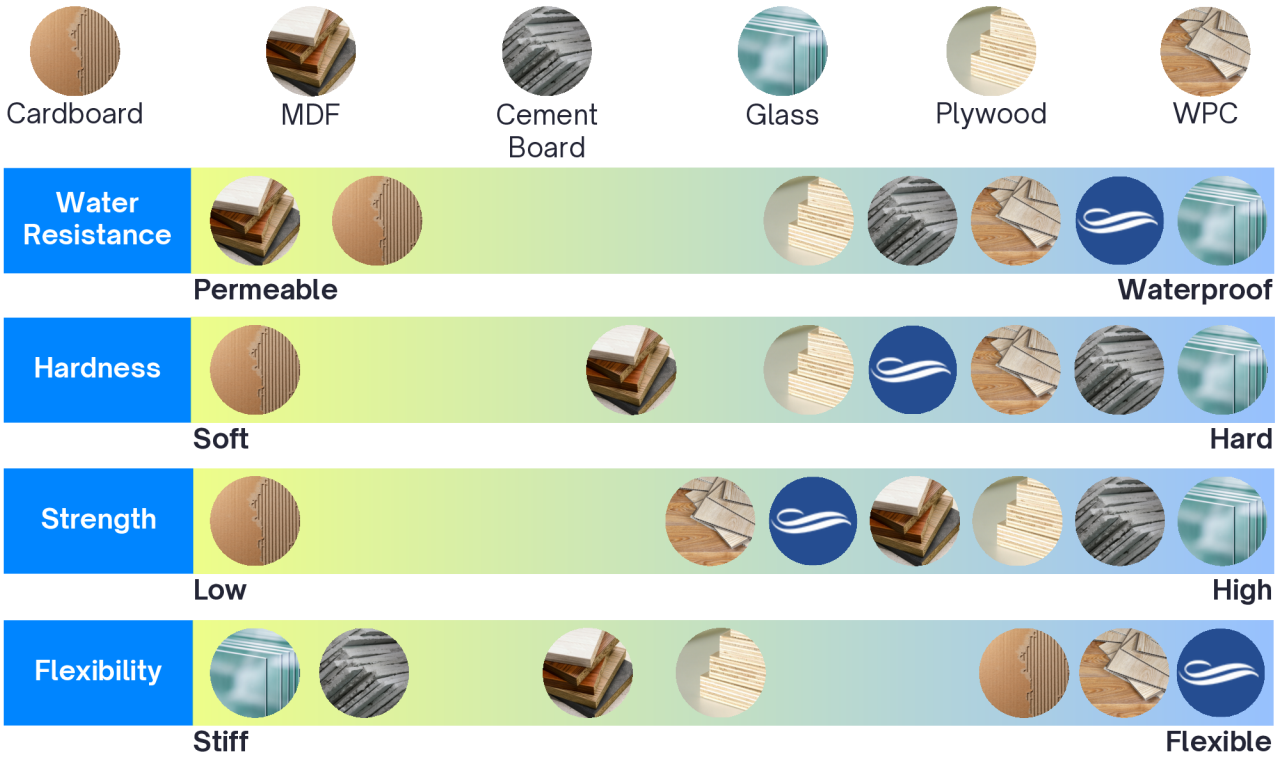
A Stronger, Smarter Alternative

RiverRecycle Boards are a high-performance, waterproof, fully recyclable alternative to wood, plastic, and composite materials. Their production process provides exceptional strength, durability, and moisture resistance without the need for chemical treatments or frequent maintenance. Unlike wood, which rots and attracts pests, or composites that are less sustainable and harder to recycle, RiverRecycle Boards retain structural integrity in any environment, supporting a circular economy.

Unmatched Versatility & Performance

- Easy to Work With: Can be cut, nailed, drilled, screwed, welded, glued, and painted with ease, even better than wood or composites.
- Flexible by Nature, Strengthened in Application: Naturally flexible material that can be integrated into structures and building systems to enhance overall rigidity and performance.
- Consistent Density & Stability: Strength varies with dimensions, ensuring optimal performance across different applications.

RiverRecycle Boards don't just match traditional materials; they outperform them in durability, workability, and sustainability while offering businesses an easy way to integrate cost-effective, high-quality, and eco-friendly solutions into their projects.



SUSTAINABILITY & SOCIAL IMPACT

RiverRecycle Boards are a direct solution to plastic pollution, transforming waste into valuable materials while creating economic opportunities. By the end of 2024, we have collected over 4 million kilograms of plastic waste from waterways, preventing it from reaching the ocean. With our growing capacity, we can recycle up to 3 million tons of plastic annually across four different countries.

Beyond cleanup efforts, our recycling operations support local economies by creating jobs in waste collection, processing, and board production. By choosing RiverRecycle Boards, businesses and individuals actively reduce environmental impact, promote circular solutions, and help build a cleaner, more sustainable future.

PROVEN AT SCALE

From river cleanup to construction-ready material

Recycling the Past. Building the Future.

RiverRecycle Boards are produced through an operational, field-tested recycling system that transforms river plastic waste into high-performance construction materials.

At our active site on the Citarum River in Bandung, Indonesia, plastic waste is collected daily from waterways and surrounding communities, processed locally, and converted into durable, waterproof boards suitable for demanding construction and infrastructure applications.

This model proves that environmental cleanup, material production, and local economic development can operate together — reliably and at scale.

OPERATIONAL SNAPSHOT

Active recycling site
Citarum River, Bandung, Indonesia

Collection capacity
up to 2,500 kg per day

Annual recycling capacity
up to 330 tons per year

Materials recovered
plastic bags, bottles, and multilayer packaging

Our model is designed to scale.

By 2035, RiverRecycle aims to operate 500 river-cleaning sites, expanding access to recycled construction materials while supporting local waste economies in regions most affected by plastic pollution.

For project developers, architects, NGOs, and partners, this means:

- A stable and traceable material supply
- Consistent board quality from proven processes
- A solution that works in real operating conditions

WHY CHOOSE RIVERRECYCLE BOARDS

RiverRecycle Boards are designed for projects that demand performance, reliability, and verified sustainability.

High-Performance Material

- Waterproof, mold-resistant, and durable
- Tested for strength, impact resistance, and structural stability
- Suitable for indoor and outdoor applications

Easy to Work With

- Cut, drilled, screwed, welded, and installed using standard tools
- No chemical treatments required
- Low maintenance over the product lifecycle

Measurable Impact

- Plastic waste removed from waterways
- Local jobs created in collection, processing, and production
- Circular material designed to be recycled again at end of life

Verified Safety & Compliance

- Tested for mechanical performance, chemical safety, and heavy metals
- Child-labor-free supply chain
- Non-toxic and safe for community and commercial use

Ready to build with purpose?

RiverRecycle

WhatsApp: +63 915 412 8890

email: rrboards@riverrecycle.com

www.riverrecycle.com

@riverrecycle

RiverRecycle Boards are a collaboration with:

RiverRecycle

ReForm Plastic