

RC:7055074



Profile

Enhanced
Durability.

Improved
Reusability.

Valuable
BuyBack.





URBANRoots



RC:7055074



In response to the growing demand for sustainable materials for efficient practices in the construction industry, our plastic formwork boards are designed to be recyclable, effectively reducing the reliance on new plastic production and diverting waste away from landfills.

This innovative solution addresses the environmental challenges posed by the traditional use of timber plywood in construction, offering a reliable and eco-friendly alternative that is reshaping the landscape of the construction industry.

URPB is a High Density Solid PVC Formwork. It has the same sizes and applications as plywood formwork, but with much better performance. In wooden structures, it can be reused at least 30 times. In Concrete structures it can be re-used up to 20 times.

This new Plastic Formwork is in accordance with the Global trend of energy conservation and environmental protection.

Economically it cuts down cost of Concrete works by Over 60% following its reusability, cyclic regeneration and fully poised to replaced traditional plywood and marine board formwork.

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Symbols used

The following symbols are used in this booklet:



Important note

Failure to observe this may lead to malfunction or damage.



Caution / Warning / Danger

Failure to observe this may lead to material damage, and to injury to health which may range up to the severe or even life-threatening.



Tip

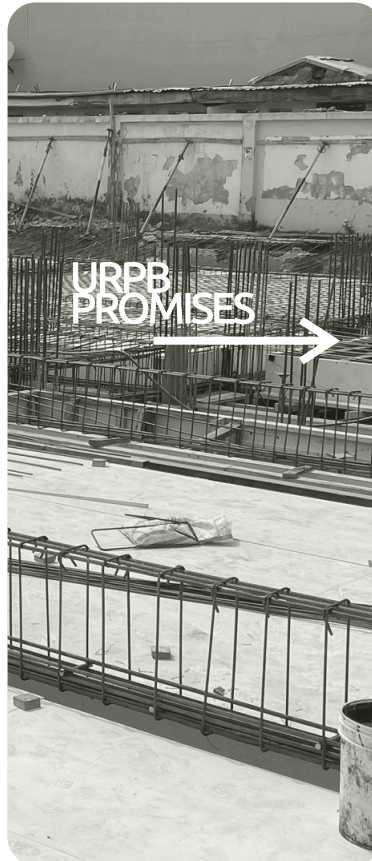
Points out useful practical tips.

9ja Made

URPB is manufactured wholly in Nigeria and has claimed a pioneering status for the production of this uniquely made and enhanced performance plastic boards.

Why UrbanRoots Plastic Formwork Boards?

Construction is very dynamic and every day, new technology and improvements are being introduced to boost Quality of Works and Cost reduction. Traditionally, concrete form work are reliant on mostly wooden/plywood boards. However in recent times the need to reduce costs, improve re-use, enhance durability of formwork has led to introduction of this Plastic Formwork board to cater for this growing need.



01. Improved Re-use

These boards boast remarkable durability and can be reused over 20 times, significantly reducing material consumption and waste generation.

02. Valuable buy back after use

Optimize your investment with our plastic formwork boards and benefit from our valuable buy-back program after use, promoting a circular economy for sustainable and cost-effective construction.

Why UrbanRoots Plastic Formwork Boards?

03. Sustainability & Adaptability

Our commitment lies in sustainability and adaptability. Embrace eco-friendly solutions with our plastic formwork boards, designed for versatile applications in ever-evolving construction landscapes.

04. Refined for Extended Durability

Engineered for lasting strength, our solutions are refined for extended durability. Choose reliability with our construction materials that stand the test of time.



05. Versatility

Explore boundless creativity in furniture making and aesthetic designs.

With our versatile construction solutions, seamlessly blending functionality and style for unparalleled results in every aspect of your project.

06. Enhanced Cost Efficiency

Clients experience reduced expenses owing to minimized logistics measures, faster assembly, and long-term reusability.

Why UrbanRoots Plastic Formwork Boards?

07. Recyclability

Prioritize the planet with our recyclable construction solutions. Embrace eco-conscious practices as our materials ensure a sustainable lifecycle, contributing to a greener and more responsible future.

08. Improved Assembling

It gives a boost to efficiency and convenience with improved assembling, ensuring a swift and seamless construction process for enhanced productivity and ease.



UrbanRoots Plastic Board is Suitable for all your building & creative needs



CONCRETE FORM WORK



Beyond the extended re-use capability of the URPB is the adaptable feature of the board.

This makes it a top choice for more works beyond concrete including fabrication, interior and aesthetic designs works, furniture works amongst others.

AESTHETIC DESIGNS



Laser Cut Designs

UrbanRoots Plastic Board is Suitable for all your building & creative needs



CHEMICAL RESISTANCE STRUCTURES



URPB gives you the flexibility to DO what you wish design and construction-wise.

FURNITURE & OTHER DECORATIVE STRUCTURES



More Applications



UV Printing



Advertising Sign



Wall Panel

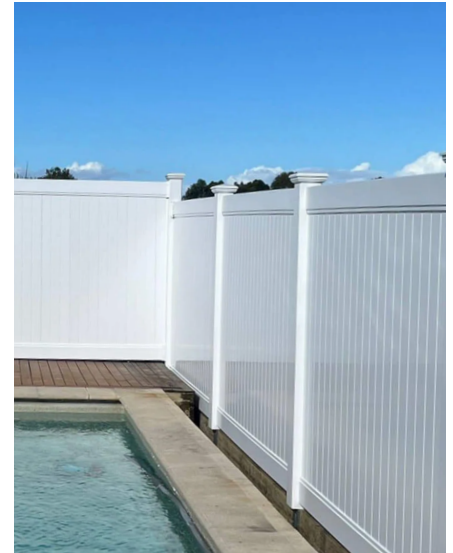
More Applications



Kitchen Cabinet



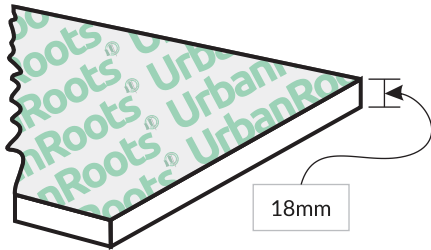
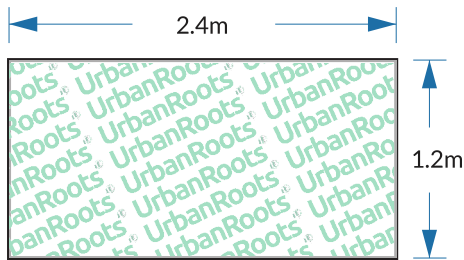
Bathroom Cabinet



Outdoor Fence

Specification

Size of the Board



Our plastic formwork board is made of quality materials, designed to withstand all forms of weather conditions.



> 6.02 N/mm²
 Compressive Strength



We can produce to custom sizes and specifications

URPB is fast gaining ground for the user & technically friendly feature it brings to construction works.

We provide free consultation on the usage to enable first time users enjoy the reusability feature maximally.

Please request for our specialised manual or free consultation if needed.

URPB is
manufactured
for upto **20x**
re-use capacity.

Critical Features & Advantages of URPB Over Regular Boards

- No need for demoulding agent.
- Improved nail holding capacity.
- Anti flaming features.
- Quality exceeds industry standard.

Water absorption rate standard

≤2.5%

URPB water absorption rate

0%

3 Point Flexural Test

Speed: 20.000mm/min
Preload: 0.100N
Width: 27.000mm
Thickness: 17.800mm
Span: 160.000mm

Bending Strength @ Peak (N/mm²)

9.22

Strain @ Peak (%)

9.448

Bending Strength @ Yield (N/mm²)

8.195

Stress @ Peak (N/mm²)

9.222

Def. @ Peak (mm)

22.648

Bending Modulus (N/mm²)

522.564

Energy to Peak (N.m)

5.944

Def. @ Peak (mm)

22.648

Force @ Peak (N)

328.7

See how we are compared to plywood, and steel.

URPB

Higher Durability
(More Than 20x reusable value).

Plywood

Lower Durability
Not more than 5x reusable value).

Steel

Low Durability
(Reusable but prone to corrosion value).

URPB

Resistance to Moisture

Plywood

Gets Damaged after long exposure to moisture.

Steel

Is corrosion prone.

URPB

100% recyclable

Plywood

0% recyclable

Steel

Can't be recycled

In the case of Steel, it loss shape faster, and difficult in handling and storage and many more.



Nailing

Nailing problems in plywood, like chipping and weak points, are addressed by the Boards, preserving nail-holding qualities without drawbacks.

To maximize their lifespan, avoid nailing too close to edges (keep nails 5 cm away) and refrain from diagonal placements.



Resistance to Fire

Elevate safety standards in construction with our plastic formwork boards – not just eco-friendly, but also exceptionally fire-resistant.

Engineered to endure high temperatures, these boards prioritize structural integrity, offering a reliable solution that merges sustainability with unmatched safety, ensuring your projects withstand unforeseen challenges.



Moisture Damage

Moisture poses a severe threat to plywood, causing dimensional changes, bulging, layer detachment, veneer peeling, and a 50% reduction in bearing capacity. The board eliminates these concerns, as it can be submerged indefinitely without altering its properties.

This foamed polymer composite absorbs only 3% water, ensuring dimensional stability. The water-resistant nature of the board enhances its value, enabling easy storage, cleaning with a pressure washer, and providing numerous benefits.

It is difficult to exhaust the technical advantages of using URPB.

However, we guarantee these features and more.



Environmentally Friendly

UrbanRoots Plastic Formwork Board is 100% recyclable, contributing to a cleaner and healthier world for future generations.



Long Lifespan

When used correctly following instructions, UrbanRoots Plastic Board is estimated to endure over 20 casts, providing excellent value and a competitive edge for our customers.



Mold & Insect Resistance

Unlike plywood, UrbanRoots Board is resistant to both mold and insect damage, offering customers a secure solution to these common threats.



Return and Barter

Our 100% recyclable boards allow for exchanges of damaged or used ones, offering long-term value to clients. Accepting boards in any state or dimension, the exchange rate is weight-based, contingent on debris and nail-free returns. For details, consult an UrbanRoots representative.



Ultra Violet Resistance

UrbanRoots Plastic Formwork Boards can endure direct sunlight for 5 years without significant changes, assuring worry-free storage in various weather conditions.



User Instructions & Maintenance

After cast cleaning and care

01.

To optimize the use of UrbanRoots Plastic Formwork Board and achieve a smooth concrete surface, it is crucial to clean the board thoroughly after each casting.

01.



Upon dismantling the forms, use a soft brush and wet cloth to promptly remove any residual concrete milk or dirt, ensuring effective cleaning of the board.



02.



To remedy screed scratches, utilize a paint scraper for surface smoothing. For stubborn rough concrete residue, employ either a concrete scraper or a putty knife to effectively scrape off any remaining material.

03.



After addressing screed scratches and removing concrete residue, rinse the surface with water. For optimal cleaning following steps 1 to 3, it is advisable to use a pressure washer.



While the Plastic Board exhibits resistance to alkali and acid, it is not advisable to employ chemicals for cleaning. The board's surface, crafted using the best of polymer technology, is designed to prevent adhesion to concrete or dirt.

02.

Cutting and resizing UrbanRoots Plastic Formwork Board

UrbanRoots Plastic Formwork Board is customized to the client's desired length, reducing waste and saving time and effort. Despite the initial cut, resizing is feasible for reuse, removal of damaged sections, or for repair purposes.



Use standard wood cutting tools.



The unique water-resistant properties of UrbanRoots Plastic Board eliminate the necessity for silicone sealing along the edges after installation in the metal frame. In contrast to traditional plywood, where it is common practice to apply silicone sealant to safeguard edges from moisture-induced damage and potential peeling of the protective face, UrbanRoots Plastic Board negates this requirement.

03.

Removal and fixation of UrbanRoots Plastic Formwork Board in formwork metal frames

It is advisable to utilize rivets for attaching UrbanRoots Plastic Formwork Board. While the board exhibits excellent nail holding capabilities, it is recommended to refrain from using nails to extend the lifespan of UrbanRoots Plastic Formwork Board and achieve a smoother concrete fair face.



Drill using 5mm wood drill bit.



Fill old holes with silicone.



Avoid drilling or hammering within a distance of less than 10cm from each other, 5cm from the board edge, or near adjacent tie rod openings.

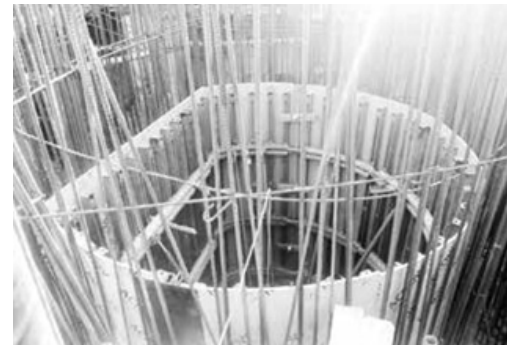
04.

Installing UrbanRoots Plastic Formwork Board in curved metal frame

Due to the polymer composite nature of the board, its molecules can be rearranged using heat, allowing us to provide curved boards tailored to the specified curvature. Technical support is available as needed.

Installation

- Put board on metal frame.
- Apply gentle pressure to the board to imprint on the metal frame.
- Fix board to the metal frame using rivets, and add 1cm washers with the rivets.



05.

Unloading & storage of UrbanRoots Plastic Formwork Boards

UrbanRoots Plastic Formwork Boards are packaged in boxes for overseas transport and securely strapped for local deliveries, as depicted in the illustrations.



For Export



For Local Distribution

Handling, Moving & Transporting UrbanRoots Plastic Formwork Board for Usage

Transport UrbanRoots Plastic Formwork Board in original packaging, using cloth lifting belts (avoid wire or chains).

Place bundles near the intended usage area, preferably on the designated slab formwork.

Do not unpack before unloading; keep bundles wrapped. Use cloth wire for lifting.



This is Right



Do Not



Avoid using steel wires or chains for lifting, as they can cause damage to the boards.



Always store UrbanRoots Plastic Board on flat smooth surface to avoid deformation, and surface damage.



In the unlikely event the edge of the board is damaged, resize the board using standard wood resizing tools.

06.

Covering the slab area with UrbanRoots Plastic Formwork Board



Distribute the boards on the slab meticulously as per approved drawings, ensuring you wear the appropriate hand protection for safety. Handle the boards with care during distribution to prevent any potential damage.



Avoid embedding board edges into concrete sections, particularly in slab connections with walls, beams, and columns. Doing so can make the dismantling process significantly challenging.



If special dimensions are necessary, feel free to use tools designed for wood to resize the board.

07.

Fixing UrbanRoots Plastic Formwork Board on Slab

When securing the board with nails, it is advised to use 5cm nails, avoiding nailing closer than 3cm to the board edge.

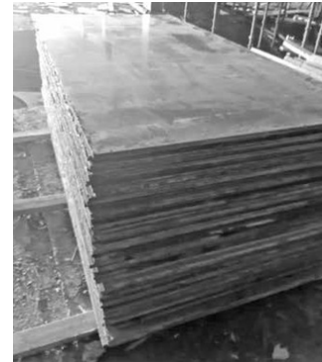
To ensure the board's longevity & adhere to the recommended usage, refrain from overnailing.

08.

Dismantling after casting

Systematically disassemble the formwork from top to bottom, avoiding the reverse order.

- A.** Begin by releasing the top unit according to the used formwork system, utilizing tools like Drop head or U-Head.
- B.** Prepare a sufficient walk platform for dismantling, utilizing secondary support if needed.
- C.** UrbanRoots Plastic Formwork Board doesn't require a release agent, ensuring easy detachment from concrete during dismantling. Handle with care to prevent damage.
- D.** Utilize standard board release tools for the process.
- E.** Collect the boards on the formwork walkways.
- F.** Lower the boards manually without dropping.
- G.** Avoid lowering large areas of secondary and primary support simultaneously, as non-adherence to concrete may cause sudden drops.
- H.** If the board edge is cast on and stuck in concrete, cautiously chisel the stuck part to prevent damage.
- I.** For post-casting cleaning and care, refer to page 7.



Advantages of UrbanRoots Plastic Board

- Cost-effective and more durable than alternatives.
- Enhances concrete surface quality.
- 100% recyclable and environmentally friendly, with a repurchase option for recycling residue.
- Non-absorbent, maintaining optimal concrete water content for improved surface treatment and finishing.
- No need for release agents; the surface doesn't adhere to concrete.
- Water-resistant, facilitating easy storage without being affected by moisture or rain.
- B2 fire resistance rating.
- Available in custom cut dimensions, reducing waste, and can be shaped into curves.
- Resistant to insects and rodents, simplifying export and import processes (no fumigation required).

An inherent advantage of UrbanRoots Plastic Formwork Board lies in its resilience to moisture and water. This unique feature enables customers to utilize the board confidently in concrete castings, contrasting with plywood boards, provided they adhere to the instructions detailed in the UrbanRoots Plastic Formwork Board manual.



Chemical resistance to alkalis and acidic solutions

Without veneer protection, wood is vulnerable to the alkaline nature of concrete, leading to rapid deterioration when the top layer is compromised or edges are exposed. The board's polymer composite ensures robust resistance to concrete's chemical aggressiveness. The board's single-layer structure eliminates the risk of veneer peeling.

Unlike plywood, Plastic Board requires no release agent before casting, preventing concrete adhesion. Only when using a slow-setting concrete retarder is a minimal amount of release agent suggested to address the slight risk of surface softness.

FAQ

Frequently Asked Question

Why do we replace a well-tested product like wood with UrbanRoots Plastic Formwork Board?

Throughout history, humans have strived to optimize resource use, seeking innovations for efficiency and time savings. Evolution is essential for progress, evident in the construction industry's adoption of cost-effective, high-performance solutions like UrbanRoots Plastic Formwork Board.

This technological advancement enables increased productivity without sacrificing quality or raising expenses, emphasizing the continuous drive for improvement in our ever-changing world.

Does UrbanRoots Plastic Formwork Board require special tools?

No, it uses the same tools as plywood.

Is UrbanRoots Plastic Formwork Board an alternative to plywood?

Yes, it's a practical, economical alternative.

Does UrbanRoots Plastic Formwork Board function similarly to plywood in construction?

Yes, it provides the same function at a lower cost with more durability.

Does UrbanRoots Plastic Formwork Board need more strengthening and support?

No, it follows the same spacing and arrangement as plywood, and structural analysis is provided.

Is UrbanRoots Plastic Formwork Board expensive?

No, UrbanRoots Board are relatively cheaper as compared to other products such as marine boards; the UrbanRoots can be employed for more than 20 reuses, delivering consistently high-quality concrete. This not only enhances economic efficiency but also surpasses the cost-effectiveness of investing.

FAQ

Frequently Asked Question

What's the initial cost comparison between UrbanRoots Plastic Formwork Board and plywood?

UrbanRoots Plastic Formwork Board matches the price of Brazilian plywood, factoring in the deducted repurchase value. Over time, Brazilian plywood allows for 8 casts, while UrbanRoots Plastic Formwork Board supports 20x More.

What's the buy-back option for UrbanRoots Plastic Formwork Board?

To promote recycling, we offer an 25% buyback option for customers to swap with new boards. We repurchase or replace used panels of any size, provided they're free of debris and nails.

How are small return plates measured for repurchase or exchange?

Returned materials are evaluated by weight, facilitating repurchase or replacement with new panels, contributing to our recycling process.

Why is there a focus on care when dealing with UrbanRoots Plastic Formwork Board?

The pivotal aspect of UrbanRoots Plastic Formwork Board is cost reduction through its extended lifespan during frequent casting. Care is essential to maximize this value.



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