



JKD Plastics is a leading manufacturer of PVC-based WPC Boards, Doors, and Door Frames, committed to delivering durable, sustainable, and low-maintenance building solutions for modern infrastructure. With advanced manufacturing capabilities, stringent quality standards, and proven institutional project experience, JKD helps create assets built to last.

Our Vision: Creating infrastructure that lasts longer, performs better, and requires less maintenance.

Our Commitment: Providing reliable PVC-WPC solutions that deliver long-term value and durability.



JKD PLASTICS

Lasting Forever



Problem

The Problem We Face Today

Government buildings frequently experience:

- Water damage in doors, frames and cabinets
- Termite infestation leading to replacement costs
- Swelling, warping and deterioration in humid conditions
- Recurring maintenance, repairs and repainting
- Reduced service life of conventional wood-based materials

Impact: Higher lifecycle costs and frequent maintenance interventions.



100%

**Service,
Manufacturing
& Resources**

Manufacturing Strength & Production Capability

JKD Plastics operates a state-of-the-art **100,000+ sq. ft.** manufacturing facility dedicated to the production of **PVC-based WPC Boards, Doors, and Door Frames. Equipped with 10 advanced extrusion lines** and an installed **production capacity of 1,100 MT per month**, the facility is designed to ensure consistent quality, reliable supply, and timely execution of large-scale institutional and government projects. **Supported by a 1 MW+ solar power plant**, JKD combines manufacturing efficiency with sustainable operations. Every stage of production is governed by stringent quality control procedures, from raw material verification to finished product inspection, ensuring durability, dimensional stability, and long-term performance.

This robust manufacturing infrastructure **enables JKD to meet the demands of public infrastructure projects** while maintaining high standards of quality, scalability, and operational reliability.

100,000+ Sq. Ft. Facility | 10 Production Lines | 1,100 MT/Month Capacity | 1 MW+ Solar Powered Operations

Solution

The Solution: PVC-Based WPC

JKD PVC-WPC products are engineered to provide:

- 100% Water & Moisture Resistance
- Termite & Borer Protection
- No Swelling, Warping or Shrinkage
- Long Service Life (25+ Years)
- Minimal Maintenance Requirements
- Suitable for Schools, Hospitals, Housing & Public Infrastructure

Outcome: Lower maintenance costs, longer asset life and improved durability for government infrastructure.



• images of manufacturing unit

Product Range

Product Insights

Complete solution: Boards, Doors & Door Frames

Water & termite resistant

Low maintenance and long service life

Multiple standard sizes with customization options

Suitable for **government, institutional, residential & commercial applications.**

WPC Boards

- Available in 6mm, 12mm, 18mm & 25mm thicknesses
- Standard size: 1220 × 2440 mm
- Moisture & termite resistant
- Paintable and printable surface
- Custom sizes available

WPC Solid Doors

- Available in 30mm & 35mm thicknesses
- Solid-core construction
- Durable and dimensionally stable
- Suitable for residential and institutional use
- Available in Light Brown & Walnut finishes



WPC Door Frame

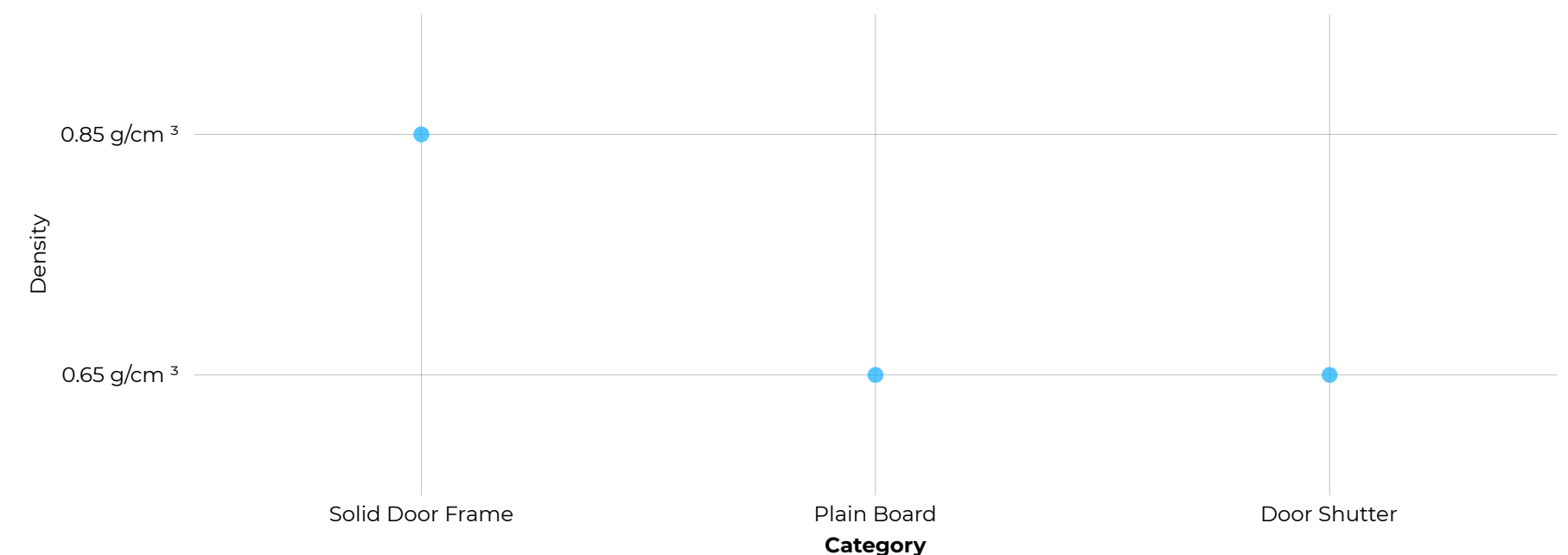


WPC Sheet

WPC Door Frames

- Available in multiple sizes (75×50 mm to 150×65 mm)
- Ready-to-install solid profiles
- Higher density for enhanced strength
- Moisture and termite resistant
- Ideal for high-usage infrastructure projects

Product density by category



What is WPC?

Wood Polymer Composite (WPC) is an engineered material blending wood fibers, polymers, and fillers. Because its performance depends entirely on the polymer base used, choosing the right formulation is essential.

PVC-Based WPC: Commonly used for interior boards, doors, and door frames, PVC-based WPC provides excellent structural rigidity and moisture resistance.

Typical Composition:

- PVC Resin (50%): The core polymer matrix for strength.
- Calcium Carbonate (30%–35%): Adds weight, density, and rigidity.
- Wood / Agro Fiber (0%–10%): Provides natural reinforcement.
- Additives (Balance): Includes stabilizers, lubricants, processing aids, impact modifiers, and white pigments.

Manufacturing Process:

Mixing → Hot Mixing → Cooling → Extrusion → Calibration → Cutting

(**Note:** This is the standard manufacturing workflow used across most WPC factories in India).

Highlight: What is PVC-WPC : PVC Resin + Wood Fibre + Calcium Carbonate + Performance Additives

MADE TO LAST LONG.

Premium **WPC** Board
Kitchen Cabinets



100%
Water Proof



100%
Termite Proof



High Density
PVC/WPC



Durable
& Long Lasting



Why WPC?

1. **Superior Screw-Holding Capacity:** Unlike PE-based WPC, which has a low modulus of elasticity and poor screw retention, PVC excels at holding screws through three key stages:

- Slight deformation during insertion.
- Firm locking directly around the threads.
- High resistance to thread stripping during pull-out.

2. **Premium Surface Finish**

- PVC WPC: Yields a perfectly smooth surface ideal for CNC routing, lamination, membrane pressing, and PU paint.
- PE WPC: Features a waxy surface that makes lamination highly difficult.

3. **Advanced Fire Performance**

- PVC WPC: Contains chlorine, making it self-extinguishing and highly resistant to continuous burning.
- PE WPC: Behaves like standard plastic and burns readily, making it less suitable for critical building interiors.

4. **Excellent Dimensional Stability**

- PVC WPC: Offers minimal thermal expansion, superior shape retention, high stiffness, and excellent creep resistance (the ability to withstand permanent deformation under a constant load).
- PE WPC: Expands and contracts significantly in hot weather, leading to warping.



Superior strength, stability, and durability.

Composition & Quality

The quality, density, and performance of PVC WPC boards are directly determined by how manufacturers balance their additives and calcium carbonate levels.

1. The Calcium Carbonate (CaCO_3) Balance

Analogy: Think of calcium carbonate like adding sand to concrete—the right amount adds structure, but too much ruins the mix.

- **Balanced Level (30%–35%):** * Yields economical production.
 - Delivers good dimensional stability and adequate structural strength.
- **Excessive Level:** * Over-loading the mix lowers production costs, but severely damages the board's physical properties.

As Calcium Carbonate Increases:

- Cost ↓ (Cheaper to make)
- Strength & Impact Resistance ↓ (Weakens the board)
- Screw-Holding Capacity ↓ (Strips easily)
- Brittleness ↑ (Prone to cracking and snapping)

2. The Impact of Additives on Density

Adjusting the chemical additive package (such as foaming/blowing agents) alters the physical structure of the board:

- More Additives -- Faster material flow and higher blowing/foaming.
- **Result:** A lighter board with lower density.

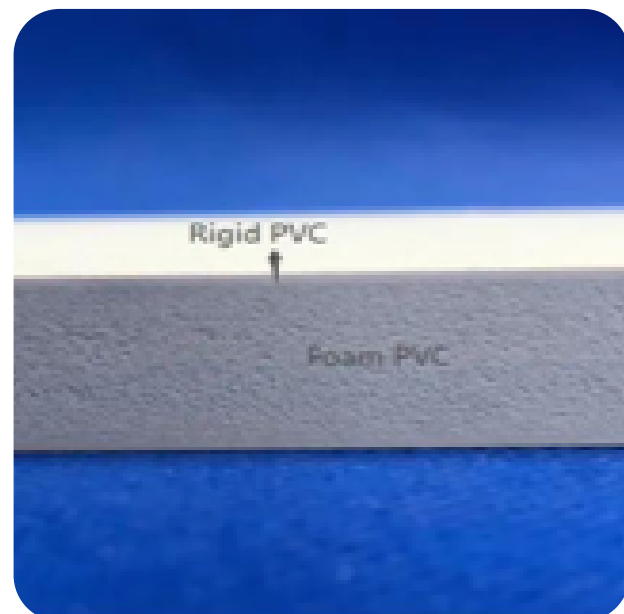
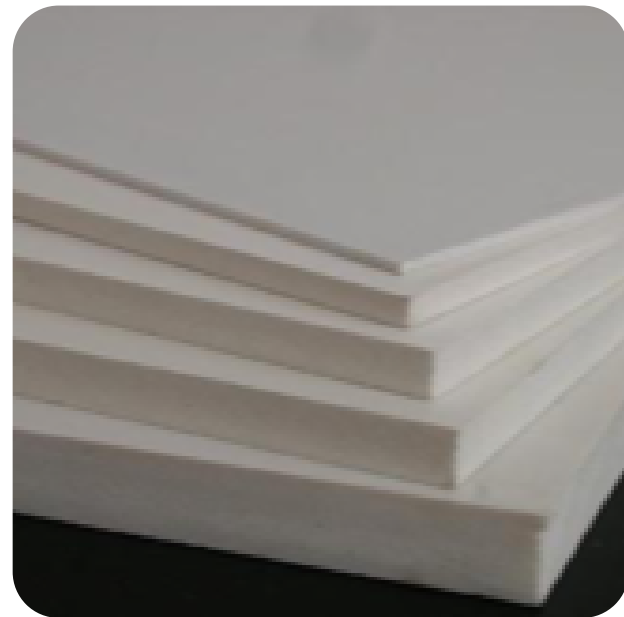
Balanced composition ensures optimal strength, density, and durability.



Visual Inspection



01. Look at the cut section



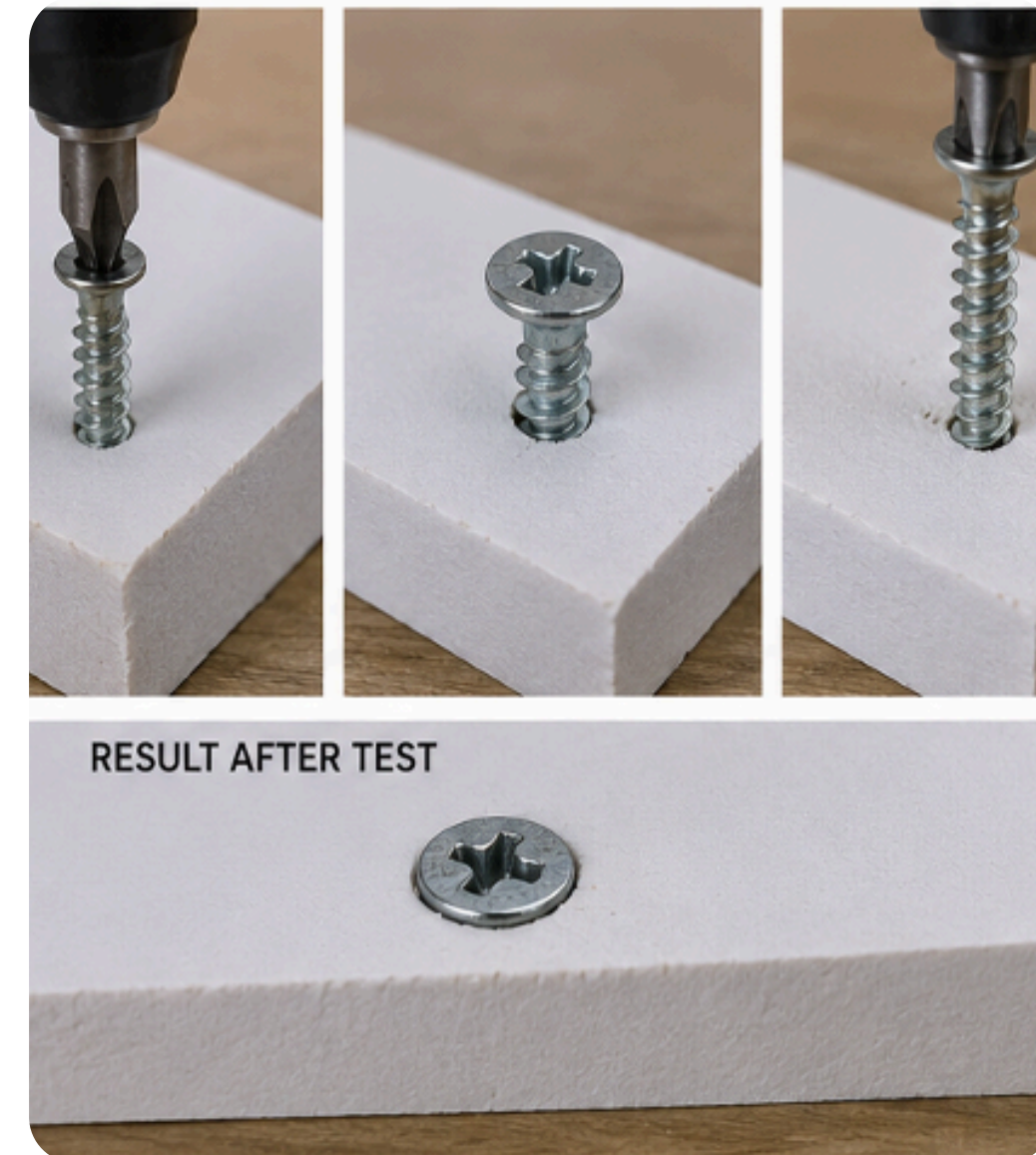
02. Observe the surface finish



03. Corner Break Test



04. Screw Test (Best Factory Floor Test)



Product Warranty

JKD WPC Product Warranty Policy: 25-Year Limited Warranty

JKD Plastics provides a **25-Year Limited Warranty** on its WPC products, protecting against:

- Moisture Failure: Water damage and degradation from moisture.
- Pest Attack: Structural damage caused by termites and borers.
- Manufacturing Defects: Any inherent factory flaws in the product material.

Warranty Conditions: To maintain warranty validity, the product must meet the following criteria:

- Standard Practices: Must be stored, handled, and installed strictly according to recommended manufacturer guidelines.
- Compatible Materials: Must be used with appropriate, high-quality screws, adhesives, laminates, paints, and hardware.

Exclusions: The warranty strictly does not cover:

- Poor Workmanship: Faults or damages caused by improper installation.
- Incompatible Components: Defects arising from the use of unsuitable hardware, adhesives, laminates, or paints.
- External Abuse & Elements: Damage from misuse, heavy impact, structural building movement, fire, accidents, or unauthorized modifications.
- Site Conditions: Performance issues rooted in flawed application designs or unpredictable environmental site conditions beyond the manufacturer's control.

Key Note: This warranty applies exclusively to the structural quality of the JKD WPC product itself. It does not cover the performance of the final, complete assembly (e.g., doors, frames, or cabinetry), which heavily depends on installation workmanship and the accessory materials used.



100%
Service



100%
Reliable

Manufacturing

JKD PVC-WPC Boards, Doors, and Door Frames are manufactured through a controlled and technology-driven process to ensure consistent quality, dimensional accuracy, and long-term durability.

Process Flow

Raw Material Selection → Mixing → Extrusion → Calibration → Cooling → Cutting → Quality Inspection → Packaging

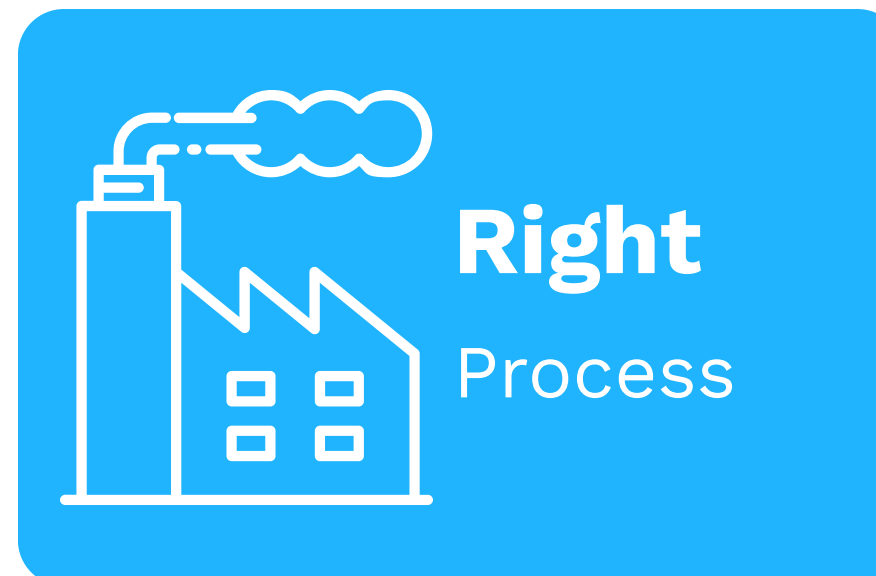
Process Overview

- Premium PVC resin, wood fibre, calcium carbonate, and performance additives are carefully selected and blended for uniform composition.
- The material is extruded into boards, doors, and frame profiles, followed by precision calibration and controlled cooling to achieve dimensional stability and strength.
- Products are then cut to required specifications and undergo rigorous quality inspections for dimensions, surface finish, density, and overall performance.
- Approved products are securely packaged and prepared for dispatch.

Key Benefits

- ✓ Consistent Product Quality
- ✓ High Strength & Durability
- ✓ Excellent Dimensional Stability
- ✓ Water & Termite Resistance
- ✓ Reliable Performance for Long-Term Infrastructure Applications

Result: Engineered for strength, manufactured for reliability, and built to deliver long service life with minimal maintenance.



Quality Control

JKD follows a comprehensive quality control system covering raw material verification, in-process inspections, dimensional accuracy checks, and finished product testing to ensure consistent product quality and long-term performance.

Quality Assurance

Quality begins at the source. All critical raw materials, including PVC resin, calcium carbonate, stabilizers, additives, and wood fibre, are verified against predefined specifications before entering production.

Key Quality Controls

- Raw material verification and supplier certification
- Batch-wise inspection during manufacturing
- Dimensional accuracy monitoring
- Surface finish and appearance inspection
- Density and hardness verification
- Final product approval before dispatch

Quality Focus Areas

- ✓ Consistent Composition
- ✓ Uniform Surface Finish
- ✓ Dimensional Stability
- ✓ Structural Strength
- ✓ Long-Term Product Reliability



Testing

Every product undergoes physical and visual inspections to ensure compliance with internal quality standards and performance requirements

Visual & Surface Inspection

- Smooth and uniform surface finish
- No visible cracks, pits, stains, or defects
- Consistent colour and appearance

Dimensional Testing

- Length & Width Verification
- Diagonal (Squareness) Check
- Thickness Measurement
- Flatness (Warpage) Assessment

Performance Testing

- Density Verification
- Shore D Hardness Testing
- Water & Moisture Resistance
- Termite & Borer Resistance
- Fire Retardancy Evaluation
- Strength & Durability Assessment

Laboratory Testing

Where required, products are **tested through accredited laboratories to validate key performance parameters**, including **water absorption, fire performance, UV resistance, bending strength**, and other physical properties.

SCREW TEST ON PVC FOAM BOARD

GOOD QUALITY PVC WPC			HIGH CALCIUM / POOR QUALITY PVC WPC		
SCREW INSERTION	NO EDGE CRACKING	STRONG HOLD	SCREW INSERTION	EDGE CRACKING	POOR HOLD
<p>RESULT AFTER TEST</p>			<p>RESULT AFTER TEST</p>		
<ul style="list-style-type: none"> ✓ Screw enters smoothly ✓ No cracking around the edge ✓ Strong screw holding / Difficult to pull out 			<ul style="list-style-type: none"> ✗ Edge cracking during screwing ✗ Material chips out around the screw ✗ Screw pulls out easily / Poor holding strength 		
<p style="text-align: center;">INDICATES GOOD QUALITY & BALANCED FORMULATION</p>			<p style="text-align: center;">INDICATES HIGH CALCIUM CONTENT / POOR FORMULATION</p>		

NOTE: Screw test is one of the quickest and most reliable methods to judge the quality of PVC foam board.



Testing Process

1. Length
2. Width
3. Diagonal
4. Thickness
5. Warpage
6. Weight
7. Shore D Hardness

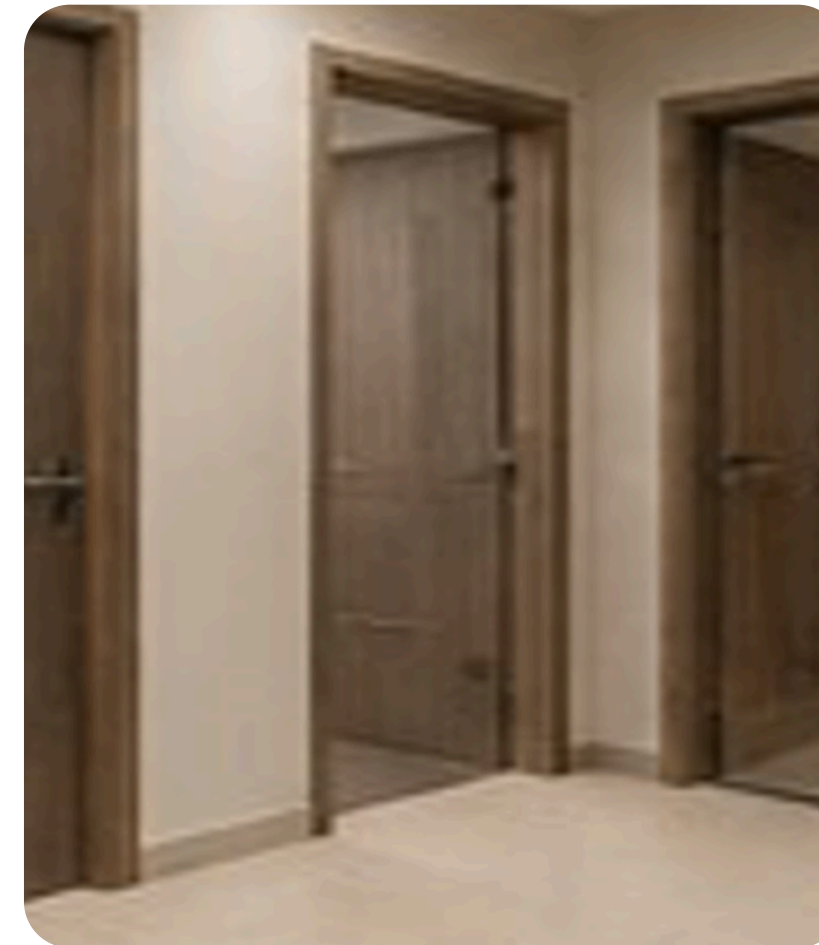
Practical Application

JKD PVC-WPC Boards, Doors, and Door Frames are suitable for a wide range of residential, commercial, institutional, and infrastructure applications where durability and low maintenance are essential.

Key Applications

- Cupboards, wardrobes, and storage cabinets
- Modular kitchens and utility furniture
- Bathroom vanities and washroom cabinets
- Office workstations and institutional furniture
- School, college, hospital, and hostel interiors
- Government housing and township projects
- Wall paneling, partitions, and decorative cladding
- Site offices, security cabins, and temporary structures
- Service ducts, utility rooms, and storage areas
- Doors, door frames, and partition systems

Ideal for government, institutional, residential, and commercial projects requiring long service life and minimal maintenance.



Comparison of WPC with Plywood, MDF & Particle Board

Parameter	WPC	Plywood	MDF	Particle Board
Water Resistance	✓ Excellent	✗ Poor	✗ Poor	✗ Poor
Termite Resistance	✓ Complete Protection	✗ Vulnerable	✗ Vulnerable	✗ Vulnerable
Swelling & Warping	✓ No	✗ Common	✗ Common	✗ Common
Service Life	✓ 20–30+ Years	⚠ Moderate	⚠ Moderate	⚠ Low
Maintenance	✓ Minimal	✗ High	✗ High	✗ High
Fire Retardant Option	✓ Available	✗ Limited	✗ Limited	✗ Limited
Outdoor/Humid Use	✓ Suitable	✗ Not Recommended	✗ Not Recommended	✗ Not Recommended
Screw Holding Capacity	✓ High	✓ Good	⚠ Moderate	⚠ Moderate
Surface Finish	✓ Smooth & Paintable	✓ Good	✓ Good	⚠ Average
Lifecycle Cost	✓ Lowest	✗ Higher	✗ Higher	✗ Higher

Key Insights

- WPC outperforms conventional wood-based materials in moisture-prone and termite-prone environments.
- Requires minimal maintenance and significantly reduces replacement costs over its lifecycle.
- Maintains dimensional stability without swelling, warping, or cracking.
- Provides a longer service life, making it ideal for government and institutional infrastructure projects.
- Offers better long-term value despite a slightly higher initial investment.

Takeaway

While plywood, MDF, and particle board may have a lower upfront cost, WPC delivers superior durability, lower maintenance, and significantly better lifecycle value.

COSTs

While PVC-WPC products may have a slightly higher initial procurement cost compared to conventional wood-based materials, they deliver substantial savings over their service life through reduced maintenance, minimal repairs, and longer replacement cycles. This makes WPC a cost-effective solution for infrastructure projects where durability and long-term performance are critical.

Key Cost Advantages

- Minimal Maintenance Requirements – No regular polishing, repainting, or protective chemical treatments required.
- Reduced Replacement Costs – Resistant to water, termites, swelling, and cracking, resulting in a significantly longer service life.
- Lower Lifecycle Expenditure – Reduced repair frequency and maintenance interventions lower overall ownership costs.
- Improved Asset Longevity – Products retain their structural integrity and appearance for decades under normal usage conditions.

WPC Boards

Designed for furniture, partitions, cabinets, wall panelling, and interior applications.

- Expected Service Life: **20–25 Years**
- Initial Cost: **₹120–₹150 per sq. ft.**
- Maintenance Requirement: **Negligible**
- Water & Termite Resistance: **100% Resistant**
- Repair Frequency: **Very Low**
- Lifecycle Benefit: **Up to 30–40% savings compared to MDF** and particle board due to reduced maintenance and replacement.

Best Value: High-moisture areas such as kitchens, washrooms, utility rooms, and institutional furniture.

WPC Door Frames

Designed for long-term structural stability and resistance to environmental damage.

- Expected Service Life: **30+ Years**
- Initial Cost: **₹350–₹450 per running foot**
- Maintenance Requirement: **Negligible**
- **No termite treatment required**
- **No sealants or chemical protection** needed
- Stable dimensions and **long-term performance**

Best Value: Significantly reduces maintenance and replacement costs commonly associated with timber door frames.

WPC Doors

Engineered for high durability and dimensional stability.

- Expected Service Life: **25–30 Years**
- Initial Cost: **₹2,500–₹3,500 per door**
- Maintenance Requirement: **Minimal**
- No warping, swelling, or cracking
- Optional pre-finished surfaces **reduce finishing costs**
- **Water & Termite Resistance: 100% Resistant**

Best Value: Eliminates recurring costs associated with door repairs, repainting, and moisture-related damage.

Projects

Government & Institutional Projects

- Military Engineering Services (MES)
- Haryana Police Housing Corporation
- IOCL Refinery Township, Panipat
- Tirumala Tirupati Devasthanams (TTD), Andhra Pradesh
- Government Zilla Parishad High Schools, Andhra Pradesh
- Government Agriculture University, Punganur, Chittoor (AP)

Ongoing Projects

- IOCL Refinery Township Project, Panipat
 - Modular Wardrobes
 - Storage Cabinets
 - Utility Units
 - Kitchen Storage Systems
 - Institutional Furniture Applications

Export Markets Served

- Sri Lanka – Puwakaramba Enterprises
- United States – TC Millwork
- Seychelles – Civil Construction Company
- Maldives – Fahamas Group Pvt. Ltd.

Project Highlights

- Government Infrastructure Projects
- Residential & Township Developments
- Educational Institutions
- Religious & Public Institutions
- Industrial Housing Projects
- International Export Projects

LifeCycle



LOOKS NEW. PERFORMS BETTER. ALWAYS RELIABLE.



WATERPROOF

100% Waterproof
No Swelling



TERMITE PROOF

100% Termite &
Borer Proof



HEAT RESISTANT

Withstands Heat
& Humidity



HIGH HOLDING STRENGTH

Strong Screw Grip
Long Lasting Hold



NO SWELLING

Dimensionally Stable
Always Strong



LOW MAINTENANCE

Easy to Clean
Zero Maintenance

Lifecycle Cost Summary

Although PVC-WPC products may involve an upfront cost premium of approximately 10–20% over conventional alternatives, the total cost of ownership is substantially lower due to:

- ✓ No termite treatment costs
- ✓ No recurring repainting or polishing
- ✓ Minimal repairs and replacements
- ✓ Reduced maintenance interventions
- ✓ Service life exceeding 25 years

Director's Message

At JKD Plastics, we believe that infrastructure should be built not only for today, but for decades to come. Across India, public buildings, housing projects, educational institutions, and government facilities continue to face challenges related to moisture damage, termite attacks, frequent maintenance, and premature material failure.

Recognizing these challenges, we have focused on developing high-performance PVC-WPC solutions that offer durability, reliability, and long-term value. Our Boards, Doors, and Door Frames are engineered to withstand demanding environmental conditions while significantly reducing maintenance and replacement costs over their lifecycle.

Our commitment extends beyond manufacturing quality products. We continuously invest in advanced technology, quality assurance systems, sustainable manufacturing practices, and skilled human resources to ensure that every product delivered meets the expectations of modern infrastructure projects.

Today, JKD Plastics is proud to support government, institutional, residential, and international projects with solutions designed for long service life, structural stability, and consistent performance.

Our Vision: To contribute to the development of durable, sustainable, and low-maintenance infrastructure through innovative PVC-WPC solutions.

Our Commitment: To deliver products that provide long-term value, reduce lifecycle costs, and help create infrastructure assets that stand the test of time.

"We do not simply manufacture products; we create solutions that help build stronger, more sustainable infrastructure for future generations."

— Shivam Bansal
Director, JKD Plastics