THE TIMBER-FREE MATERIAL FOR MODERN MANUFACTURING & CONSTRUCTION

INDOWUD®
DESIGN TECHNOLOGY

HIGH-PERFORMANCE INDOWUD NATURAL FIBRE COMPOSITE FOR DEMANDING INTERIOR AND EXTERIOR APPLICATIONS

Natural Fibre Composite (NFC): Crafted from agricultural husk, natural minerals, and thermoplastics. Delivers the warmth, workability, and beauty of natural timber without felling a single tree.

LOOKS & FEELS LIKE WOOD

100% TIMBER-FREE

EPD VERIFIED FOR LEED

ZERO DEFORESTATION



INTERNATIONALLY TESTED
UL 94 V-0 | ASTM E84 CLASS A
FLAME SPREAD INDEX 06
FIRE PERFORMANCE

UK/EU classification to EN 13501-1 is in progress.

EXTERIOR & STRUCTURAL APPLICATIONS

Architectural façades, exterior cladding, decking, outdoor furniture, pergolas, fencing, gates, modular prefab systems, and SIP/OSB panel alternative.

INTERIOR & JOINERY ARCHITECTURE

Fire-retardant door assemblies, thermoformable, decorative wall & ceiling panelling, luxury kitchen cabinetry, wet room vanities, partitions, and transport/marine fittings.

CLADDING



FURNITURE & PANELLING



EPD®
THE INTERNATIONAL EPD® SYSTEM

EPD VERIFIED FOR LEED

WATERPROOF & WEATHER PROOF
Withstands extreme monsoon rainfall, frost & high humidity without swelling.

PEST, TERMITE & FUNGI IMMUNE
100% termite proof, rodent deterrent, and anti-fungal certification.

ZERO VOC EMISSIONS
Free from formaldehyde,harmful glues, and airborne toxic off-gassing.

WORKSHOP FRIENDLY & ROUTING
Saw, drill, screw, CNC rout, print, laminate, veneer and thermoform with ease.

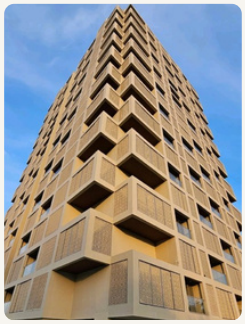
Quality the world and time can test.

- Termite proof
- Water proof
- Flame retardant - V_0 rating in UL94 test, Class 1 or A as per ASTM E84
- Easily machinable
- Durable
- Anti rodent
- Good screw holding
- Resistant to fungus, algae or mold
- UV resistant
- Thermoformable
- Smoke suppressant
- Resistant to expansion/contraction

COMPARATIVE STUDY OF INDOWUD NFC AGAINST OTHER WOOD ALTERNATIVES

No	Property	Indowud NFC	PVC / WPC Foam	Plywood	MDF
1	Density (kg/m³)	650 – 800	400 – 600	650 – 750	600 – 700
2	Raw Materials	Natural fibres & thermoplastics	PVC and fillers	Wood, Formaldehyde, Phenol	Wood, Urea formaldehyde
3	Termite & Borer Proof	100% Yes	Not always	No (Vulnerable)	No (Vulnerable)
4	Water Proofing	100% Waterproof	Yes	Temporary	No (Swells)
5	Flame Retardancy	Yes (UL94 V-0)	Hazardous	No	No
6	Screw Holding Strength	Above par (2252 N)	Below par	Above par	Below par
7	Conventional Tools	Fully Compatible	Yes	Yes	Yes
8	Laminate / Veneer Overlay	Compatible	Not always	Compatible	Compatible
9	Application Scope	Indoor & Outdoor	Preferably indoor	Indoor primarily	Indoor only
10	Swelling & Warping	No Swelling (0.06%)	No Swelling	Prone to swelling	Prone to swelling
11	Weather & Ageing Resistant	UV & Weather Proof	Brittle / Fades	Delaminates	Disintegrates
12	Eco-Friendly Credential	Yes (Timber-Free)	No	No	No

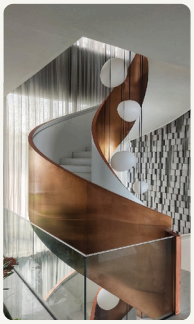
CRAFTED WITH INDOWUD NFC — FINE LIVING & ARCHITECTURAL APPLICATIONS



HIGH-RISE CLADDING



THERMOFORMED CEILING



THERMOFORMED HELICAL STAIRWAY



INDOWUD NFC DOOR SET

CERTIFIED TEST REPORTS & ACOUSTIC DATA

INTERNATIONALLY BENCHMARKED LABORATORY VALIDATION

Parameter	Test Method	Unit	Result
Density	ASTM D792	kg/m³	**800.35**
Water Absorption (2 hrs)	IS: 2380	%	**0.02**
Water Absorption (24 hrs)	IS: 2380	%	**0.12**
Thickness Swelling (2 hrs)	IS: 2380	%	**0.06**
Modulus of Rupture (Average)	IS: 2380	N/mm²	**14.50**
Modulus of Rupture (Min. Individual)	IS: 2380	N/mm²	**14.40**
Modulus of Elasticity (Average)	IS: 2380	N/mm²	**1,327**
Modulus of Elasticity (Min. Individual)	IS: 2380	N/mm²	**1,290**
Screw Withdrawal (Face)	IS: 2380	N	**2,252**
Screw Withdrawal (Edge)	IS: 2380	N	**1,409**
Tensile Strength	ASTM D638	MPa	**7.60**
Compressive Strength	ASTM D695	MPa	**40.20**
Elongation at Break	ASTM D638	%	**2.00**
Charpy Impact Strength	ASTM D6110	kJ/m²	**6.25**
Heat Deflection Temp (0.45 MPa)	ASTM D648	°C	**64.45**
Softening Temperature (@ 1 kg)	ASTM D1525	°C	**72.50**
VOC Emissions	EPA: 5035A	mg/kg	**< Detection**
Biological Termite Resistance	IS 4833	Visual	**Zero Attack**
Fungal Resistance	IS 4873	Micro	**Zero Attack**
Borer Resistance	IS 4873	Visual	**Zero Attack**

ACOUSTIC INSULATION (IS 10420 / ISO 10534-2)

Frequency	Absorption Co-Eff.	Transmission Loss
125 Hz	0.02	26.19 dB
250 Hz	0.03	22.53 dB
500 Hz	0.04	32.85 dB
1,000 Hz	0.06	40.20 dB
1,500 Hz	0.06	44.50 dB
2,000 Hz	0.05	47.33 dB
2,500 Hz	0.05	45.61 dB
3,000 Hz	0.06	47.83 dB
3,500 Hz	0.08	46.60 dB
4,000 Hz	0.10	47.56 dB

Sound Transmission Class (STC): 40.12 dB

FIRE & REACTION TO FLAME

Standard	Code Limit	Certified Result
UL 94 Flammability	V-0 / V-1 / V-2	**V-0 Rating**
ASTM E84 Flame Spread	0 – 25 (Class A)	**6 (Class A)**
ASTM E84 Smoke Index	≤ 450	**100**
UIC 564-2 Appendix 11	Rail Standard	**Class A**

UL 94 • V-0 Flame Retardance
Vertical burning stops within 10 seconds of flame removal with zero burning drips.

ASTM E84 Class A Surface Burning
Flame Spread Index of 6 satisfies highest building code escape route classifications.

UIC 564-2 Passenger Rail Standard
Certified fire protection standard for passenger carrying railway vehicle coaches.



INDOWUD®
DESIGN TECHNOLOGY

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BOOK A FABRICATION TRIAL

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Indowud Europe Limited

Feeling Good with Indowud?

- Saving Trees ✓
- Termite Proof Furniture ✓
- An Armour Against Weather ✓
- Safety Against Fire ✓
- Innovation With Simplicity ✓
- Building Sustainable Homes ✓
- Eco-Responsibility ✓
- Value For Money ✓



Regulatory Notice: Indowud NFC is currently undergoing the formal accreditation process for CE marking and UK/EU EN classification. CE compliance is pending and not yet active. All performance claims, including fire, moisture, and environmental ratings, are strictly validated by the specific international laboratory certifications (such as ASTM, UL, and EPD) detailed within this document.