

ARCHITECT'S SPECIFICATION SHEET
NOVANO ARCHITECTURAL SYSTEM
ENHANCE FIBER COMPOSITE MATERIAL SPECIFICATION

PART 1: GENERAL

1. SECTION INCLUDES

- A.** Novano Architectural System utilizes **Enhance Fiber Composite** extruded profiles for exterior and interior applications, including decking, cladding, screening, and architectural elements.

2. RELATED SECTIONS

- A.** Structural framing and support systems
B. Substructure and fixing systems
C. Surface finishing and coating applications

3. REFERENCES

The Enhance Fiber Composite material shall be tested in accordance with relevant international standards, including but not limited to:

- A.** ASTM E831-25 – Mean coefficient of linear thermal expansion
B. ISO 62 – Water Absorption
C. ASTM D790 / ISO 178 – Flexural Properties
D. ASTM D2395-17 – Specific Gravity
E. ASTM E84 – Surface Burning Characteristics
F. BS 476 Part 6 & 7 – Fire Propagation and Flame Spread
G. ISO 75 – Deflection Temperature Under Load
H. ASTM D1525 – Vicat softening temperature analysis
I. ASTM D2240 – Hardness
J. ASTM E303 – Slip Resistance
K. EN 15534 / ASTM D3273 – Resistance to Fungi and Mould
L. CEN/TS 15083 – Resistance to Rot

4. DELIVERY, STORAGE AND HANDLING

- A.** Store materials off the ground on flat, level supports
B. Provide adequate ventilation and protection from direct exposure prior to installation
C. Support spacing shall not exceed 500 mm

5. WARRANTY

- A.** A minimum 15-year limited warranty shall be provided against material defects, rot, and decay under normal use conditions.

PART 2: PRODUCTS

1. MANUFACTURER & DISTRIBUTION

Novano Architectural System

Manufactured by:

Wundaplast Sdn Bhd

No. 2 & 4, Jalan Canggih 1, Taman Perindustrian Cemerlang, 81800 Ulu Tiram, Johor, Malaysia
Tel: +60 18-371 7830 / +60 18-384 7829
Email: sales@wundaplast.com

Marketed & Distributed by:

Retica Enterprise Pte Ltd

23 Balmoral Road, #16-25, Singapore 259806
Email: infor.retica@gmail.com

NOVANO Building Products North America

4020 Cheyenne Ct, Chino, California 91710
Tel: (+1) 909 613 0183
Email: info@novanobp.com
Website: <https://novanobuildingproducts.com/>

Material Technology: Enhance Fiber Composite

2. MATERIAL DESCRIPTION

Enhance Fiber Composite profiles used in the Novano Architectural System are manufactured by Wundaplast Sdn Bhd using a proprietary blend of engineered natural fibers and high-performance polymer matrix. The material is designed to deliver:

- A.** High-dimensional stability
B. Resistance to moisture, termites, and fungal attack
C. Excellent weather durability
D. Structural integrity for architectural applications

The composite contains no wood content and is engineered for high-density performance suitable for exterior and interior use. Typical material density: ~1.45 g/cm³

3. PRODUCT CHARACTERISTICS

A. Mechanical Properties

- Flexural Strength: ~28 MPa
- Flexural Modulus: ~4000 MPa
- Screw Withdrawal: ~5500 N

B. Thermal Properties

- Coefficient of Linear Expansion: approx. 40–45 × 10⁻⁶ /°C
- Deflection Temperature Under Load: approx. 75°C

C. Physical Properties

- Density: ~1.45–1.50 g/cm³
- Water Absorption: ≤ 4%

4. DURABILITY PERFORMANCE

- A.** Resistant to termite attack
B. Highly resistant to mould and fungal growth
C. Durable against soft rot organisms
D. Minimal colour change under accelerated weathering
E. FIRE PERFORMANCE

5. FIRE PERFORMANCE

- A.** Surface Spread of Flame: **Class 1** (BS 476 Part 7)
B. Fire Propagation: Compliant with BS 476 Part 6
C. Surface Burning Characteristics: **Class A** (ASTM E84)

6. SURFACE PROPERTIES

- A.** Shore D Hardness: approx. 88
B. Slip Resistance: compliant with ASTM E303
C. Suitable for exterior pedestrian applications

7. SURFACE FINISHING & COATING SYSTEM

The Novano Architectural System utilizes Enhance Fiber Composite, which is compatible with high-performance coating systems from independent manufacturers. Surface finishing shall be selected based on:

- Project design intent
- Environmental exposure
- Maintenance requirements

Recommended coating systems (or approved equivalent):

- Intergrain NaturalStain – exterior-grade water-based stain
- PPG Architectural Coatings – exterior coating systems

Acceptable coating types include:

- Exterior-grade stains (water-based or solvent-based)
- Polyurethane or acrylic protective coatings
- UV-resistant architectural finishes for composite substrates

All coatings shall:

- Be compatible with polymer composite materials
- Be applied according to the manufacturer's specifications
- Be submitted for approval prior to application

8. COLOUR & FINISH

Final colour and finish shall be selected based on:

- Approved coating systems
- Project-specific design intent

PART 3: EXECUTION

1. INSTALLATION

- A.** Install in accordance with Novano system guidelines
B. Ensure proper substructure alignment and spacing
C. Allow for thermal expansion and movement

2. QUALITY CONTROL

- A.** Inspect materials prior to installation
B. Verify coating compatibility
C. Ensure compliance with project specifications