



Natural Fibre Composite (NFC/WPC) Material

Technical Data Sheet for Composite Decking, Cladding, Fencing and Outdoor Profiles

Document item	Description
Product family	Green Plank® natural fibre composite profiles for outdoor and semi-exposed applications
Covered products	TerraTuff™ capped solid decking, Nordeka™ solid decking, Classic™ hollow decking, Sapphire™ hollow decking, fascia boards, cladding and fencing profiles
Issuer	Green Plank®, Sweden / European production
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Important note

This Technical Data Sheet is provided for general product information only. It is not a project-specific design approval, not a construction calculation, not a warranty document and not a substitute for the relevant Declaration of Performance, installation guide, care and maintenance guide or project-specific test report. Product selection, installation and use must comply with applicable local building rules and project requirements.

1. Product Description

Designed in Sweden and made in Europe, Green Plank® composite products reflect a Scandinavian approach to outdoor building materials: simple in appearance, functional in use and engineered for long-term performance.

Developed for outdoor decking, fencing, fascia and cladding applications in Nordic and European climates, the products combine European-sourced hardwood fibres, European-sourced HDPE polymers and a selected functional additive system for outdoor durability, dimensional stability and mechanical performance.

Green Plank® products are low-maintenance, PVC-free and designed for applications where a durable alternative to traditional timber is required. Product performance depends on correct product selection, substructure design, installation, ventilation, drainage, fastening and maintenance in accordance with Green Plank® guidelines.

2. Product Types Covered

Product range	Profile type	Typical use	Surface technology
TerraTuff™	Solid decking profile	Residential, commercial and project decking	Capped / co-extruded protective surface, where supplied
Nordeka™	Solid decking profile	Residential and project decking	Uncapped through-colour composite surface
Classic™	Hollow decking profile	Residential decking and light-duty outdoor areas	Uncapped composite surface
Sapphire™	Hollow decking profile	Residential decking and light-duty outdoor areas	Uncapped composite surface
Fascia boards	10 x 80 mm finishing profile	Deck edge finishing, trim and detailing	Capped or uncapped, depending on item supplied
Cladding profiles	Exterior/interior wall profile	Ventilated facade and wall applications	Capped or uncapped, depending on product range
Fencing profiles	Fence and privacy screen profile	Fencing systems with suitable posts and rails	Uncapped or capped, depending on product range

3. Raw Material Composition

Green Plank® composite products are produced from controlled European-sourced raw materials. The formulation is designed for high natural-fibre content and outdoor durability while maintaining extrusion consistency, profile stability and a high-quality surface finish.

Material group	Typical description	Technical role in the finished product
Natural wood fibres	European-sourced hardwood fibres, primarily beech wood	Provides fibre reinforcement, stiffness, natural appearance and reduced reliance on fossil-based material
HDPE polymers	European-sourced HDPE polymers selected for outdoor composite extrusion	Provides toughness, moisture resistance, processability and long-term durability
Functional additive system	Selected additive package for outdoor natural-fibre composite products	Supports fibre-polymer bonding, processing stability, impact resistance, weathering performance, dimensional stability and surface quality
Pigments / colour system	European-sourced pigment system selected by colour and product range	Provides product colour, visual consistency and outdoor colour performance
Capping layer, where applicable	Additional protective outer surface on capped products such as TerraTuff™	Supports enhanced surface protection, colour stability, cleanability and stain resistance

Typical material composition: up to approximately 75% European wood fibres, combined with European-sourced HDPE polymers and selected functional additives and pigments. The exact formulation may vary by product range, colour, surface technology, profile geometry and production batch. Green Plank® does not disclose proprietary formulation details, material grades or exact additive ratios.

4. Functional Additive System

The additive system is selected according to product type, colour, surface technology and intended use. Additives are listed by functional group only; exact grades and ratios are proprietary.

Functional group	Purpose in Green Plank® composite products
UV stabilisers	Help protect exposed surfaces and colours from long-term sunlight and outdoor weathering
Antioxidants	Support material stability during processing and long-term outdoor exposure
Fibre-coupling / compatibilising functionality	Supports bonding between natural wood fibres and HDPE polymers for strength, durability and dimensional stability
Processing aids	Support stable extrusion, surface finish, profile consistency and production quality
Internal and external lubricating aids	Help control material flow during extrusion and reduce processing stress
Impact-resistance modifiers	Support toughness and resistance to handling, installation and service-related impacts
Heat and process stabilisers	Help maintain stability during extrusion and thermal processing
Moisture-control and dispersion aids	Support even fibre distribution and reduce processing issues linked to fibre moisture and agglomeration
Weathering-performance additives	Support long-term durability under changing temperature, moisture and UV exposure
Surface-performance additives	Used where applicable to support surface quality, cleanability and resistance to everyday outdoor exposure
Capping-layer additives	Used where applicable in capped products to support enhanced surface protection, colour stability and stain resistance

Pigments / colour masterbatch	Provide the required product colour and visual appearance
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5. Raw-Material Control Information

Parameter	Typical control information	Purpose
Wood fibre origin	European hardwood fibre, primarily beech-based	Traceability and consistent fibre quality
Wood fibre particle size	Fine wood flour / particles used for composite extrusion	Supports extrusion consistency, surface quality and mechanical performance
Wood fibre moisture control	Moisture controlled before production	Supports stable processing, reduced voids and profile quality
HDPE polymer selection	European-sourced HDPE polymers selected for WPC/NFC extrusion	Supports toughness, moisture resistance and outdoor durability
Colour and additive selection	Selected by product range, colour and surface technology	Supports product quality and long-term outdoor performance

6. Declared Performance / Technical Characteristics

The following values are typical declared/target values for Green Plank® natural fibre composite decking profiles and related products. Values may vary by profile geometry, product range, colour, capping technology and test configuration. For project tenders, public procurement, structural verification or regulatory submission, use the relevant Declaration of Performance, third-party test report or project-specific documentation.

Essential characteristic	Performance / typical value	Reference / test standard
Density	Approx. 0.94 g/cm ³	EN 15534-1 / EN 15534-4, where applicable
Flexural strength	30-45 MPa	EN 15534-1 / EN 15534-4
Flexural modulus	3500-5000 MPa	EN 15534-1 / EN 15534-4
Tensile strength	15-25 MPa	EN 15534-1, where applicable
Water absorption	< 1% typical target value under relevant test conditions	EN 15534-1 / EN 15534-4
Dimensional stability	High; expansion gaps must be allowed in installation	EN 15534-1 / EN 15534-4
Resistance to rot / fungal decay	Resistant under normal above-ground outdoor use	EN 15534-1 / EN 15534-4
Resistance to insects / termites	Not a food source for insects under normal service conditions	EN 15534-1 / EN 15534-4, where applicable
Slip resistance	Profile and surface dependent; see product-specific test report where required	EN 15534-1 / EN 15534-4; EN 16165 where specified
Mechanical suitability	Suitable for decking applications when installed according to Green Plank® instructions	EN 15534-4 and project design requirements
Reaction to fire	Project and product dependent; classification to be confirmed by relevant report where required	EN 13501-1

Performance note

Mechanical and material values correspond to the Green Plank® natural fibre composite product family described in this Technical Data Sheet. Values are not intended to replace project-specific structural design, fire classification, slip testing or procurement documentation where such documentation is required.

7. Installation and Design Reference Data

Item	Green Plank® reference requirement / recommendation
Decking joist spacing - residential	Maximum 600 mm c/c for approved decking profiles when installed perpendicular to joists and according to Green Plank® installation instructions
Decking joist spacing - commercial/project	Use project-specific spacing; typical maximum 400 mm c/c for TerraTuff™ and Nordeka™ commercial applications, and 350 mm c/c for Classic™ and Sapphire™ commercial applications
Compatible substructures	Composite joists 40 x 70 mm, treated timber joists 45 x 90 mm, aluminium joists 40 x 40 mm, or project-approved equivalent
Slope / drainage	Minimum 1 mm per metre away from buildings or standing-water areas. For hollow decking, slope must be integrated into the construction. For solid decking, slope is recommended and may be required by project conditions.
Side gap between parallel boards	Plastic clips typically provide approx. 5-6 mm. Steel/stainless clips typically provide approx. 3-4 mm. Use only approved Green Plank® fixing systems.
End-to-end / short-end gaps	Use Green Plank® temperature-based short-end gap table in the installation guide. Do not install boards tight end-to-end or tight against fixed objects.
Perimeter clearance	Maintain suitable clearance to walls, posts, frames, thresholds and fixed objects; typically minimum 20 mm unless otherwise stated in the installation guide.
Ventilation	Keep the substructure open and ventilated. Do not block drainage or fill the void under the deck.
Fastening	Use start/end clips, hidden clips and stainless steel screws as specified. Pre-drill where required. Do not over-tighten screws.
Structural use	Green Plank® decking boards are walking-surface profiles only and must not be used as beams, columns, primary joists, support posts or load-bearing structural members.

8. Surface, Colour and Weathering

Green Plank® composite profiles contain natural wood fibres. Minor colour variation, grain variation, batch-to-batch variation and natural colour maturation can occur, especially in uncapped products. This is normal for wood-based composite products and does not affect product function when the product is correctly installed and maintained.

- Capped products such as TerraTuff™ are designed with an additional protective outer surface for enhanced cleanability, colour stability and stain resistance.
- Uncapped products such as Nordeka™, Classic™ and Sapphire™ may show more natural colour maturation and water-mark behaviour during early weathering.
- Standing dirt, pollen, leaves, construction dust, metal grinding dust, grease, oil, food stains and organic growth must be cleaned according to the Green Plank® Care and Maintenance Guide.

9. Sustainability and Traceability

Topic	Green Plank® position
European sourcing	Principal raw-material streams are sourced within Europe and traceable through Green Plank® internal procurement and quality-control procedures
Natural fibre content	High natural wood-fibre content, primarily European beech-based hardwood fibres
PVC-free	Green Plank® composite products are PVC-free
Low maintenance	No regular oiling, staining or painting is required under normal use
Waste and off-cuts	Handle according to local waste and recycling rules. Large project quantities should be managed through approved waste routes.

10. Storage and Handling

- Store profiles flat on a dry, level surface with supports aligned to prevent deformation.
- Keep products covered with an opaque breathable cover when stored outdoors before installation.
- Avoid direct sunlight exposure immediately before cutting and fixing, especially for long boards. Boards stored in sun may already have expanded.
- Allow boards to reach a similar temperature before final cutting and installation.
- Check product type, colour, quantity, visible defects and batch consistency before installation. Visible defects reported after cutting or installation may not be accepted as product claims.

11. Regulatory and Project Responsibility

Green Plank® products must be selected and installed according to the Green Plank® installation guide, product datasheets, local building regulations and the requirements of the specific project. Architects, engineers, contractors, installers, property owners and project responsible parties must verify suitability for each application, including load, fire, slip, drainage, ventilation, accessibility and local code requirements.

For public projects, commercial applications, balconies, roof terraces, marine-like environments, high-traffic areas, special fastening conditions or unusual design details, project-specific approval, testing or written confirmation from Green Plank® may be required before installation.

12. Disclaimer

The information in this Technical Data Sheet is provided in good faith and is based on Green Plank® product knowledge, raw-material control data, production experience and available technical information at the date of issue. Because installation conditions, climate exposure, design details, maintenance routines and project requirements are outside Green Plank® control, this document does not constitute a guarantee of fitness for a particular purpose.

Green Plank® reserves the right to update product specifications, formulations, colours, dimensions, installation requirements and documentation without prior notice. The latest published Green Plank® installation guide, care and maintenance guide, warranty document, Declaration of Performance and project-specific test reports shall prevail where applicable.

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