



## Technical Data

### PLEASE READ IN FULL BEFORE COMMENCING ANY ecodek® INSTALLATION

**Product Description:** ecodek® composite decking is a mixture of hardwood fibres (approximately 55%) and high density polyethylene with the addition of certain additives to improve physical, weathering and processing properties. The polyethylene used in this product is a high quality, recycled material made up of mainly bottle, film and pipe materials. The hardwood fibres are also a recovered material which are processed, filtered and dried before being compounded with the polyethylene. The resulting product is 90-96% recycled and 100% recyclable.

ecodek® has many useful properties when used as decking, these include:

- Low moisture absorption
- Resistant to rotting, no splintering or splitting
- In-built termite and UV resistance
- Excellent dimensional stability
- Slip resistant surface in the wet and dry (tested to HSE standards)
- No toxic materials to leach into the soil
- Easy as wood to work with

**Application Data:** Both ecodek® **AT** and **HD** profiles are well suited for use as decking, pool sides, marinas and other similar applications. They may also be used as a replacement for wood in many other areas where a non-load bearing support or structure is required. The other profiles in the range can be used for fencing, railings, cladding and post & rail projects to name but a few. ecodek® profiles are best suited for outdoor applications where the product's inherent advantages over wood can be exploited as fully as possible.

**ecodek® Installation Instructions:** More detailed instruction is included in our **Quick Reference Guide for Installers** available to download from our website. It is vital that you read this data sheet before commencing any ecodek® installation. Use the same tools used for timber to fabricate and install ecodek® decking products. With the **AT** deck boards, support frame joists must be spaced on maximum centres of 455mm (18") or less for residential decks. With the **HD** deck boards, support frame joists must be spaced on maximum centres of 600mm (24") or less for balconies & general residential installations. For commercial applications, please refer to the **Load Span Table** available on our website. When laying the timbers at 45 degrees, support frame joists should be on centres of 330mm (13") or less (for **AT**) and 425mm (16") or less (for **HD**). Boards should not overhang the joists by more than 40mm. When butting boards end to end, this must be done over a

double width bearer to ensure both boards are sufficiently fastened down and supported. Screw holes must be pre-drilled (to prevent splitting) at least 20mm, and not more than 40mm in from the cut edge. Deck boards must span at least 3 bearers in order to give the board the load bearing properties stated in our literature and to eliminate the possibility of sagging over time.

For optimum water drainage and to allow for proper ventilation, a gap of 5mm must be left in-between the boards and a minimum 5mm gap at the cut ends of the boards **(for hot, humid or damp areas, a 10mm gap is required between the cut end of the board and any walls)**. Failure to do so will promote fungal growth and prevent moisture evaporation, these gaps will also allow for material expansion in hot weather. Good airflow under the deck is vital to prevent moisture remaining for long periods on the underside of the boards, poor airflow will invalidate the warranty. **If you are installing over soil or a poorly draining surface you must have a minimum ground clearance of 80mm.**

Only use ecodek® approved stainless steel composite deck screws, normal timber decking screws are not strong enough and will invalidate the ecodek® warranty. The screws we supply are specifically designed for ecodek®. They are available in a range of colours to match the decking. Use 2 screws per joist/bearer (if using 53mm screws, then 3 screws per joist). Always pre-drill before screwing the board down, we recommend using a SMART-BIT® for fast & easy drilling (available from Ecodek).

Never leave the end of the board unrestrained, it must be pre-drilled & screwed down within 20-40mm of the cut end. The screw head should not sit proud of the top of the groove (or decking surface if using a smooth board). Do not use fasteners within 18 mm of the side of the board. (The rule of thumb is to screw into the second groove on each side of the board if using the grooved side.)

**NB: If using either the 38mm x 88mm Superstiff or the 40mm x 48mm low profile substructure products then it must be noted that they need more support than softwood equivalents. It is therefore very important that you refer to Technical Data sheets 24 and 25 for specific fitting information. It must also be noted that when screwing composite to composite, the screw pilot holes must be 3.5mm diameter and at least 90% of the depth of the screw, this is because composite is very tough and if the pilot hole is not deep or wide enough, the screw can shear off during installation.**

If you intend to use the ecodek® Heavy Duty Post at any length over 1.4m, then you must use a 2" scaffold pole down the centre to within 500mm of the top of the post for reinforcement.

#### **Slip Resistance of ecodek®:**

ecodek® has been extensively tested for its Slip Resistance Value (SRV or PTV). Under normal conditions, ecodek® meets the HSE's standard for a flooring that they describe as 'Low Potential for Slip'. In order to maintain your ecodek® deck as a slip resistant surface, **it is imperative that you regularly wash the deck to remove dirt/algae and other foreign bodies as these will have a negative effect on the SRV.**

It is also important to maintain any drainage channels or gaps that you have in your deck so that standing water is kept to a minimum. SRV's are as tested on a level surface.

**If ecodek® is to be used on an incline (such as an access ramp) then the SRV will reduce accordingly and we strongly recommend the use of anti-slip treads (see the Anti-slip Insert information sheet available on our website).**

It is the responsibility of the purchaser to ensure that the product remains 'fit for purpose' for whatever gradient the decking is used on. Consideration must be given to the method of construction of the ramp so as to maintain optimum levels of grip (i.e. direction of boards, angle of incline, amount of foot traffic etc). ecodek® can help specify various non-slip products specific to any particular application. (Enquire for further details.)

#### **ecodek® Care & Maintenance:**

Because of the combination of natural hardwood fibres and recycled high density polyethylene in ecodek® composite boards, you may experience slight colour variation between boards as you lay them, this variation will weather to a slightly lighter, but much more even hue during the first few months but may take much longer in shaded areas.

**Note: Fading is significant on the lighter colours and if colour fade is an important factor for you, we advise choosing a darker colour such as Dark Brown, Slate Grey or Black for your deck.** *"Slight colour variations are natural within any composite deck product. These variations are not a product defect and thus are not covered by the product warranty."*

Do not allow leaves and other debris to lie on the deck surface as this will cause staining and promote fungal growth. When using a barbecue or similar, it is recommended that a plastic sheet or other suitable material is placed around the area to protect the deck from oil/grease splashes. Most heavy stains, dirt and mildew can be washed off using garden hose, deck cleaner and soft brush. We recommend our composite deck cleaner, available directly from us at ecodek®. Oil and grease stains may require the use of a de-greasing cleaner and light rubbing with a very soft brush or sponge to remove the stain (See the **ecodek® Care and Maintenance Schedule** available

to download from our website). Keeping the deck clean, free of debris and maintaining drainage and ventilation gaps are essential basic maintenance requirements.

**Regular washing of your deck with a proprietary grade of deck cleaner containing anti-fungal additives will keep mould spores at bay and also allow your deck to maintain an optimum level of slip resistance.**

*Not cleaning your deck may allow fungal growth to spread which will invalidate your warranty.*

#### **Sizes & Colours:**

ecodek® is currently available in 5 standard colours, 2 shades of brown, 2 shades of grey and black. Other colours and lengths can be manufactured upon request. (See the profile range literature for a more comprehensive and detailed list.)

#### **Profile sizes (approx):**

- **AT** - 21mm x 136mm Grooved/Ribbed reversible deck board in bespoke lengths between 1.5m and 6m (up to 9m available at extra cost)
- **HD** - 25mm x 136mm Grooved/Ribbed reversible deck board in bespoke lengths between 1.5m and 6m (up to 9m available at extra cost)
- 19mm x 136mm fascia board in 3.15m lengths
- 38mm x 88mm (sub-structure) heavy duty solid profile in various lengths
- 40mm x 48mm low profile substructure in various lengths
- 88mm x 88mm heavy duty post in 1.83m lengths

#### **Handling & Storage:**

ecodek® is heavier and more flexible than wood and this needs to be considered when transporting boards. Boards should always be stored on a flat surface or on a close boarded, full length pallet with bearer centres of 900mm or less for up to 1200 kilos full pallet weight and 600mm centres or less up to a maximum of 1500 kilos full pallet weight.

#### **Warranty Details:**

ecodek is the trading name of Specialist Building Products Ltd. ecodek® composite products come with a limited 25 year warranty against structural failure caused by termites, fungal decay, splitting and splintering. It must be noted however, that for this warranty to be upheld, the product must have been installed and maintained to the guidelines as set out in our literature. Please read our warranty (available from our website) for further information.

#### **ecodek® Exclusive Waste Material Buy-Back Scheme:**

Because ecodek® products are manufactured from "clean" plastic products and untreated hardwood, we are able to fully recycle all waste, off-cuts, old stock or otherwise unused material returned to us in suitable condition. This is obviously of considerable environmental benefit, and because it will

reduce our forward material costs, it also has financial benefits. We will therefore offer customers a credit of £0.30 per kilo for returned product subject to the following conditions:

1. Material to be returned by the customer to:  
Ecodek,  
Unit 13 Abenbury Way,  
Wrexham Industrial Estate,  
Wrexham LL13 9UZ  
or another site by mutual prior agreement.
2. All material must be in a clean, dry and uncontaminated condition to qualify.
3. All material must be fully segregated by individual colour and all fasteners removed.
4. This buy-back offer applies only to wood/plastic composite products manufactured by Ecodek.
5. Advance notification of all returns to be made to the manufacturer at the above address.
6. Ecodek are unable to give a full refund on unused boards, all material returned will be treated as scrap and therefore only creditable as such.
7. In the event of any dispute regarding the condition or quantity of returned material, the decision of Ecodek will be final.

## ecodek® Trouble-Shooting Guide

Effect	Probable Cause	Action Required
Colour variation after Installation	This is to be expected prior to natural weathering.	Once the material has been exposed to the elements for a few months, the colour should even out.
Colour variation after weathering	Darker areas may be exposed to less weathering.	Wet the darker areas with water to accelerate the weathering effect. If the area suffers from constant shade, use Saicos deck cleaner (treat as a heavily soiled area) to accelerate the process.
Water puddles/warped boards	An un-even support structure, inadequate gapping, poor ventilation or clogged gaps between boards.	Drainage slots may need to be cut into inadequately spaced boards. Install adequate ventilation gaps. For clogged gaps, use a flat tool to remove the debris.
Ice or snow build up	Water puddles followed by below freezing conditions.	You can use rock salt, although it may scratch the decking. Other ice-melt products may leave a slippery residue (consult with product manufacturers).
Oil/grease stains	Oil stains, barbecues, food etc.	Refer to <b>ecodek® Care and Maintenance Schedule</b> available on our website
Heavily soiled area	Foot traffic, airborne dust, pets etc.	Refer to <b>ecodek® Care and Maintenance Schedule</b> available on our website and use our recommended composite deck cleaner.
Mould/dark spots	Can appear on poorly vented, drained or heavily shaded decks and under furniture.	Refer to <b>the information sheet Mould and Fungus Removal</b> available on our website and use 'Simply Gone' mould & mildew cleaner. Contact us for details/
Oil/grease stains	Rust marks	Use our recommended composite deck cleaner and a very soft brush or sponge on the marks.

# ecodek® Physical Properties

<b>Mechanical Property</b>	<b>Test Method</b>	<b>Value</b>
Ultimate Tensile Strength (UTS)	EN ISO 527	10 MPa
Elastic Modulus (MOE)	EN ISO 178 Span 150mm	2 GPa
Maximum Stress (MOR)	EN ISO 178 Span 150mm	22 MPa
Impact Notched	EN ISO 179 : Part 1	3 kJ/m <sup>2</sup>
Water Absorption	ASTM D1037	0.6%
Coefficient of Expansion	Across length	0.08 mm/m/°C
Screw Retention (composite decking screw)	Compared to Red Cedar	76% greater
Nail Retention (5mm ring shank)	Compared to Red Cedar	18% greater
Density	EN ISO 1183	1.11 ± 0.05 g/cm <sup>3</sup>
Slip Resistance (Grooved/Dry)	BS ISO 15676	PTV=58 (Low potential for slip)
Slip Resistance (Grooved/Wet)	BS ISO 15676	PTV=37 (Low potential for slip)
Hot Nut Test	BS 4790:1987	16mm (Approved for domestic & contract use)
Mid Span Point Load	BS 1195:1998	Refer to Load Span Table

<b>Carbon Footprint</b>	<b>Assessment Method</b>	<b>Value</b>
GHG Emissions	Life Cycle Assessment (LCA)	-190kg CO <sub>2</sub> eq. per tonne