



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
- No rotting, 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:

Ecodek® 25mm x 136mm profiles are well suited for use as decking, fencing, 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, garden edging 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 Installation Guide for Installers - Data Sheet 1'. **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 25mm x 136mm deck boards, support frame joists must be spaced on maximum centres of 455mm (18") or less for residential decks, 405mm (16") or less for commercial applications. When laying the timbers at 45 degrees to the support frame the joists should be spaced on centres of 330mm (13") or less (300mm or less for commercial applications). Boards should not overhang the joists by more than 40mm.

(If using the 24mm x 95mm deckboard, joist centres should be 355mm (14") max and 255mm (10") if fitting diagonally.)

When butting boards end to end, this must be done over a double width bearer to ensure both boards are sufficiently fastened down. **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 the growth of mildew 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. Only use screws designed for composite decking, normal timber decking screws are not strong enough and will invalidate the Ecodek warranty. We supply a stainless screw specifically designed for Ecodek®. It is available in a range of colours to match the decking. Use 2 screws per joist/bearer (if using 50mm screws, then 3 screws per joist). **Always** pre-drill before screwing down the board, 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 sit flush with the bottom 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 the 38mm x 88mm sub-structure profile (i.e. as a joist), it must be noted that it needs more support than with a softwood equivalent. We recommend either laying the substructure profile directly on the surface to be built upon, or supporting it on posts but with a maximum span of 1 metre between post supports, secondly, there must never be more than 100mm overhang at the end of the substructure profile. It must also be noted that when screwing composite to composite, the screw pilot holes must be 3.5mm dia



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 datasheet 19). 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 and 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

mildew 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 a power washer and a deck cleaner. We recommend 'Our Composite Deck Cleaner & Revive' (available from most hardware stores or direct from us at Ecodek). Oil and grease stains may require the use of a de-greasing cleaner and light rubbing with a soft brush or sponge to remove the stain. 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 dirt and algae 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):

- 25mm x 136mm reversible deck board in 2.4m, 3.6m and 4.8m lengths
- 54mm x 66mm shaped handrail / reversible base rail profiles in 3.15m lengths (suitable for ground level decks only)
- 36mm x 36mm octagonal spindle profile in 3.15m lengths
- 19mm x 136mm cladding board in 3.15m lengths
- 38mm x 88mm (sub-structure) heavy duty solid profile in various lengths
- 88mm x 88mm heavy duty post in 1.83m lengths
- 24mm x 95mm & 25mm x 136mm smooth decking profiles – various 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 1350 kilos full pallet weight and 600mm centres or less up to a maximum of 2500 kilos full pallet weight.



Warranty Details:

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

- Vannplastic Limited,
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 un-contaminated condition to qualify.
 3. All material must be fully segregated by individual colour.
 4. This buy-back offer applies only to wood/plastic composite products manufactured by Vannplastic Ltd.
 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 Vannplastic Ltd. will be final.

Trouble-Shooting Guide:

Effect	Probable Cause	Action(s) 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 a proprietary 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 (<i>consult with product manufacturers</i>).
Oil/grease stains	Oil stains, barbecues, food etc.	Remove oil/grease stains with a household or automotive de-greasing product as soon as possible.
Heavily soiled area	Foot traffic, airborne dust, pets etc.	Use a power washer and Our Composite Deck Cleaner & Revive. (See datasheet 8 available on website.)
Mould/mildew	Can appear in poorly drained or heavily shaded areas and under deck furniture	Use ‘Simply Gone’ mould & mildew cleaner, available from Ecodek. (See datasheet 16 available on website.)
Rust marks	Low quality fasteners, ferrous objects such as garden furniture	Use Our Composite Deck Cleaner & Revive and a soft brush or sponge on the marks.



Codek® Physical Properties

Mechanical Property	Test Method	Value
Tensile Strength	BS2782: Part3, method 320C 1	1.3 Mpa 2.1% Elongation
Flexural Modulus	ISO 178 Span 150mm	4181 Mpa
Flexural Strength	ISO 178 Span 150mm	31.5 Mpa
Impact Notched	BS2782: Part3, method 359	8.4 KJ/m ²
Impact un-notched	BS2782: Part3, method 359	11.1 KJ/m ²
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
Specific Gravity		1.1 ± 0.05
Slip Resistance (Grooved/Dry)	BS 7976-2:2002	PTV=58 (Low potential for slip)
Slip Resistance (Grooved/Wet)	BS 7976-2:2002	PTV=37 (Low potential for slip)
Hot Nut Test	BS 4790:1987	16mm (Approved for domestic & contract use)
2.7kN Mid Span Point Load	BS 1195:1998	455mm bearer centres
4.5kN Mid Span Point Load	BS 1195:1998	405mm bearer centres