



Plastecowood Ltd
Installation guidelines for Smartawood recycled plastic lumber products.
Conditions of guarantee
Please read the whole document carefully before opening the packages

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Plastecowood's Smartawood Products

Fencing and general installation recommendations.

Thank you for choosing Plastecowood's Smartawood Endurance Plastic Products. For installations please follow these guidelines and recommendations to ensure that the guarantee remains valid. Our guarantee will only apply where the guidelines have been correctly followed.

Applications

Plastecowood's Smartawood recycled plastic lumber is suitable for a wide range of external applications in place of traditional timber, steel, and concrete. It is 100% plastic and so, does **not** behave exactly like any of these traditional products. Smartawood has robust structural strength and a high level of flexibility and tolerance to strain. This information and technical data are available on request. If in doubt as to the suitability of Smartawood for your application, please contact our office on 01745 827000 to discuss with our sales team. We also have a technical department that may be able to assist.

Fencing or similar applications

Smartawood is recommended for most fencing applications. Please see installation guidelines below. Like all similar products, we recommend that height of the fence and span between upright posts should be carefully considered. For example, we recommend that spans for post and rail do not exceed 1.7m metres centre to centre (of post). Where a fence is to be erected at over 2 metres above ground, consideration should be given to using our steel reinforced product. Where a solid fence or acoustic barrier is to be installed in exposed areas, consideration should be given to wind-loading and additional support provided either through steel reinforcement, steel uprights, or additional buttressing with Smartawood product.

Storage

Plastecowood's Smartawood product is made from 100% recycled waste plastic. It's a plastic product and behaves slightly differently from timber or steel. That entails a slightly different approach in respect of storage and utilisation to other materials. Plastic will expand and contract in the

heat and cold and that can lead to slight deformation of the product (mainly distorting off “true”, bending) when not supported or connected at both ends. This can be minimised by keeping the product closely banded using the nylon banding provided by Plastecowood until near the time the product is to be fitted. If very hot or sunny weather is likely, please also keep the product covered with material. Usually our product will be delivered with a suitable covering to reduce the impact of heat and/or sun. Once connected at both ends the product will continue to contract and expand with the heat. However, if you follow these guidelines there will be no impact on the final installation.

Wherever possible and practicable, installed uprights should be connected to rails or panels as quickly as possible in order to make the structure as rigid and self-supporting as possible.

Cutting and drilling tools and saw blades

Smartawood is extremely tough and durable and is quite abrasive. As a result, drill bits and saw blades should be tungsten carbide tipped.

Non-plastic contaminants

Smartawood is made from segregated waste plastic. Plastecowood endeavours to remove as much non-plastic contamination as possible from its input material but occasionally small pieces of metal foil can be incorporated in the profiles, posts, boards, and planks.

Personal protective equipment

Appropriate Personal Protective Equipment should be worn when working with Smartawood including safety glasses, gloves, safety boots and ear protection when cutting or drilling.

Thermal expansion and contraction

Plastic will expand in the heat and contract again when it cools. Where fence rails meet on a post they should not be butted up too tightly but a gap of at least 10 mm should be left between them.

Fence rails will twist in the heat if they expand, and they are too tightly joined/ abutted.

Plastecowood Ltd recommends that rails and/or palings are attached to posts using good quality galvanised mushroom capped bolts which

penetrate both the rail and the upright typically with countersunk nuts where appropriate.

The holes on any lumber attached to a rail or post should be oversized to allow for expansion and contraction. Ideally two immediately adjacent holes should be drilled to form one oval aperture to enable the bolt to move with contraction and expansion or, as a rule of thumb, we recommend a drill hole in the rails **double the size** of the chosen bolt e.g. 6mm gauge bolt, 12mm drill bit. Please ensure you purchase bolts with a sufficiently large head to cover the enlarged drill hole.

Do not overtighten the nuts on the bolts to allow “wiggle room” for some movement as the rails expand and contract.

Expansion gaps should also be allowed where Smartawood boards are used for topdecks/topboards.

Fence Post installation

Upright posts should be installed so that one third of the post is below ground and two thirds above ground. Consideration should be given, dependent on weight and span of rails and palings and also site-specific application (weather and ground conditions etc.), as to whether posts should be installed with concrete surround below ground. If in doubt, posts should always be concreted in.

Post and wire stapling

For post and wire fencing galvanised fencing staples to a maximum of 25mm length can be used but it is important that two pilot holes are drilled first for each staple as the outer surface of Plastecowood's Smartawood product is very tough to penetrate, and fencing staples may bounce off with the potential to cause injury. Personal protective equipment should be worn including safety goggles and suitable gloves. Ideally screw fixings should be used instead of hammered nails or staples. Whilst fixing wire to Smartawood may take slightly longer than hammering staples into traditional timber, Plastecowood products will not require further maintenance or replacement for many years beyond the lifetime of traditional timber posts.

Colour and dimensions variation and non-melts

Product dimensions and colour can vary slightly due to the nature of process and input material. Plastecowood's input material is low grade waste plastic which means that there is wide variety of different plastics which are reprocessed in Plastecowood's recycling process. Different plastics melt at different temperatures but in order to maintain consistent strength and rigidity, Plastecowood processes at a consistent temperature. For this reason, Plastecowood's Smartawood products will evidence small pieces of non-melt plastic which can be of different colours to the main profile. This does not affect the integrity or strength of the product.

Cutting profiles along the length

It should be noted that whilst cutting across a profile i.e. across the shortest section of the profile which does not exceed 150mm, is a standard operation, cutting lengthways along the profile can be problematic, particularly on longer sections. This is because the strength of the profile is in the outside casing which is visible looking 'end-on'. It is likely that removing one side of the "casing" will cause the profile to lose its structural strength and internal tension and bend. On shorter sections for packing or filling this may not be significant to the user, but this practice is not recommended where strength and straightness are important.

Environmental awareness

Please also endeavour to collect and dispose of responsibly any loose material resulting from drilling or cutting to avoid plastic being lost into the environment.

Smartawood can be recycled at the end of its life by arrangement with Plastecowood Ltd.

Decking

This document does not cover installation advice for decking. Please request decking specific advice from the sales office.

Advice and helpline

For advice on installing any of Plastecowood's products please call our helpline on 01745 827000 during office hours which are 0900 to 1600 Monday to Friday.

Plastecowood component guarantee

Plastecowood Ltd offers a 10 year no quibble guarantee component exchange guarantee on all its products, subject to fair wear and tear, users following Plastecowood Ltd.'s installation advice and recommendations, and assuming reasonable care with installation and suitability of product for the application. If in doubt, please ask our helpful sales and technical staff:

01745 827000 info@plastecowood.com.