Wishbone
building materials

EVERYTHING YOU NEED TO KNOW ABOUT WORKING WITH 100% RECYCLED PLASTIC LUMBER

Recycled plastic lumber is an amazing product when used in the right applications and installed following the correct guidelines. Keep in mind that not all plastic lumber is made equal; know the composition of the material you are working with prior to installation.

The following recommendations will apply to most 100% recycled plastic products and specifically relate to the *Re-Plast Advantage+* and *Ultraplast* brands. For other materials, it is suggested that you contact the manufacturer directly as each brand has a mixture of plastics used in its composition which can affect some of the outcomes and recommendations stated below.

- ***Properly support 100% plastic lumber***
  *(*N.B. the material is not structural and will sag, over time, under its own weight*)*

  A. Spans of a minimum of 18" OC for 1.5" thick planks and 12" OC for 1" thick planks.

  B. Overhang should be kept to a maximum of 4".

  C. Storing the material on a rack or the ground, supports should be no greater than 24" OC with a maximum overhang of 12".

  D. Avoid direct sunlight before installing lumber. If the material has sagged, it can be straightened out by flipping over the plank and allowing it to warm up in order to straighten out.

- ***Allow for expansion and contraction of 100% plastic lumber***
  *(*N.B. 100% plastic lumber is sensitive to changes in temperature*)*

  A. Consideration should be given to expansion and contraction; gaps should be provided between the boards when installing our lumber. As an example, a 10' board will expand or contract 1/8" over a 10°C temperature change.

  B. Coefficient Linear Thermal Expansion / ASTM D6341 / 0.0000896 in/in/°C

  C. Acclimate the lumber before installation outdoors or indoors and be aware of the ambient temperature in your area on the day of installation.

  D. Lay out the lumber for outdoor installations. If a pallet of lumber has been left outside in the sun, consider the bottom boards will be cooler than the upper boards. This can cause problems after installation once all the lumber has regulated to the same temperature.

  E. Boards that are installed too tightly, once fully expanded, can buckle together potentially causing fasteners to snap around the impacted zone.

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F. Rule of thumb: On a colder than average day, the lumber will have contracted. Leave a larger gap for expansion. On a warmer than average day, the lumber will have expanded. Place the planks tighter together, leaving a smaller gap.

- ***Of fasteners and fastening***
  *(*N.B. 100% plastic lumber needs the freedom to move*)*

A. Always use stainless steel fasteners. You will get the best performance out of the lumber by using the correct fasteners.

B. Always pre-drill prior to fastening to avoid cracking or splitting the lumber.

C. Tighten the fasteners firmly, but not too tight; the lumber needs to be able to move for expansion/contraction.

D. Installing directly to another surface, oversize the holes in the lumber by 2-3 times the size of the fastener. Countersink to allow the head of the fastener to hold snugly.

E. Installing to a metal frame, use an oversized, slotted hole in the frame with a washer and lag bolt for the lumber.

F. Use 1 centered fastener on each support, at most. The plastic lumber will not cup or warp and only needs to be help in place.

- ***Use all the same wood working tools***
  *(*N.B. 100% plastic lumber can melt if it is overheated with tools*)*

A. Cut our lumber with a carbide blade; fewer teeth is better. We recommend using a Diablo 10" X 50 teeth combination circular saw blade, however, a regular all-purpose blade works as well.

B. Do not use a finishing blade as it will melt the plastic and make it difficult and messy to work with the material.

C. When using a chop saw, cut with a chopping motion to allow cooling of the blade and the lumber.

D. After cutting, edges can be rough and sharp. Use a small hand router or hand file to soften the edges.

E. Do router the end of your planks to mask any noticeable differences in the rates of expansion/contraction of each board. A softer edge will show less variation

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