

EIN Superwood notes

The EIN Superwood (ESW) is a mixed timber of resin and wood powder, that has different characteristics from natural wood, so please pay attention to the following matters when designing and constructing.

I. Design considerations

■ Matters to elongation (joint, fixing holes)

- ESW slightly expands and contracts due to heat and water absorption.
- When arranging the materials, take joints of about 5 mm in the width direction in the case of flooring materials and 3 mm in the case of wall material.
- For the longitudinal direction, please take a joint of about 3mm / m.
- The same also applies to other structures such as buildings.
- In case of using for louver and beams, make the structure able to absorb the expansion shrinkage of the material parts. (Such as making the bolt hole a long hole, etc.)



Joint condition



Long hole hardware



Joint set

■ Fixing method

- When using it for flooring, wall materials, etc., be sure to use joists and furring strips and attach the material on them.
- Avoid placing the board directly on the concrete surface.

■ Overhang length

- Be sure to fix the end of the ESW and reduce the overhang as much as possible.

■ Long span use

- Long-term creep deflection occurs when used in a long span such as Louver.
- Use the special reinforcement materials to suppress deflection.
- When using with a long span, fix it at 3 points or more. The deflection can be suppressed better than fixing it at two points.

■ Surface deterioration

- As a characteristic of synthetic wood, due to aging, there is a possibility that the surface deteriorates and the pigment which is kneaded may be exposed and may adhere to clothing. For parts as table or bench, that contacts directly the clothing, use the special paint for finish coating.

■ Surface temperature

- It may become very hot due to direct sunlight in summer, please avoid to walk on bare feet.

II. Notes on construction

[1] About storage

■ Storage

- Do not store ESW materials in upright position, it may deform. Please, lay it down flat.
- In case of temporary storage, please cover with a curing sheet to protect from direct rain.
- Do not drop hard objects such as hammers. It may cause crack chipping.
- Caution with impact when putting the cutting edges on a hard ground.



[2] About processing

■ Processing method

- ESW processing is possible with tools that are not different from conventional wood such as cutting, drilling, chamfering, and cutting.
- As the wood chip contains resin, it does not return to the soil. Please collect and handle it properly.
- Cutting the cross section in the length direction may cause deformation. Please avoid as much as possible.

[3] About construction

■ Screw striking

- In case of screwing in, please pierce a pilot hole beforehand.
- The pilot hole should be larger than the screw diameter.
- Please use the stainless steel screws.
- If a screw is drilled near the cut end, there is a risk of cracking towards to the edge. Please be careful.
- In the case of an electric screwdriver, set the torque to a weak force and perform a screw drive.
- In case of over-tightening and idling, increase the screw size by 1 size and tighten it again.



Drill a Pilot hole



Screw striking

■ Column Embedding method (use of cushioning material)

- In case of you use posts such as ESW to embed in concrete, there is a risk of destroying the concrete by expansion.
- Therefore, either wrap a resin foamed sheet in the embedded part or place a base plate type, it must not contact directly the concrete.



Resin foam



Damaged foundation

■ About air holes and drain holes

- In the case of a hollow material, water will accumulate due to rainwater or condensation, so please provide a drain hole of ϕ 5 ~ 8 mm on the bottom side.
- Also, air holes are necessary when sealing with a cap, etc.

■ Cap attachment

- The small cap is slightly larger.
- After attaching it, adjust the chamfer by using hand planes, trimmer, etc.
- To attach and fix the cap, the exclusive bond EIN super bond or screw must be used.



■ Bond adhesion

- In case of gluing ESW materials to each other, please use exclusive bond EIN - super bond.

■ Painting

- In case of painting on ESW, please use exclusive paint EIN - Super Aqua.

※In addition, if you may have any questions on design and construction etc, please contact us.