



## Cutting, Storage & Handling **Guidelines**

## Receipt

Check the condition of the packs. If there is any damage, record it on the carrier's consignment note that the driver will ask you to sign. The damage must be reported to Knotwood within 24 hours. Please include the job number and photos of the damaged pack/s and damage to the material, if possible.

Find the packing slip on each case and check the quantities are correct and nothing is missing. If you believe something is missing, please report this to Knotwood immediately.

## Storage

Please ensure the packs are stored on a level surface and raised off the ground.

Never stack packs higher than three packs

Packs must be kept dry and stored out of direct sunlight. If the material is not stored properly, it can be affected by "blanching". This is caused by moisture or condensation that is trapped between the protective film and the powder coat, being forced into the coating.

## Safety

Always wear appropriate PPE such as gloves, safety glasses and hearing protection when cutting and handling aluminium. If you are cutting with an angle grinder, please ensure that you wear appropriate respiratory protection to prevent inhalation of fine aluminium particles and safety boots to protect your feet.

## Unpacking

Cut the nylon case straps with scissors or a knife. Then carefully run your blade along the side of the pack length ways to remove the case wrapper. Care should be taken not to damage the coated Knotwood material when opening the pack. Next remove the timber skids.

The case wrapper, protective film and bundle wrap are non-recyclable and should be disposed of in onsite waste skips. Cardboard and timber packaging materials are recyclable.

## Handling

Material is typically bundled together in lots of 2-5 pieces inside the pack, for easier handling. Always carry extrusions on their edge. Best practice is to carry longer lengths of material in teams of two people. Material should be carried horizontally on its edge, where possible.

Shorter cut lengths can be carried by one person if the material is carried horizontally on its edge in the centre. When hoisting material vertically be aware of overhead power lines.

To avoid damage never slide material on the coated surface.

When the protective film has been removed from the extrusion, handle with clean hands or with gloves to avoid transferring oils onto the coated surface.

## Marking

If masking tape is used for labelling, use low tack painters masking tape. Write on the tape before affixing to the aluminium. If the tape leaves any residual, remove it with IPA or methylated spirits and then wash down with Ph neutral detergent and fresh water.

## Cutting

Blades need to be sharp to give the best cutting result.

Leave protective film on while cutting, only remove it before installation. If you are cutting off-site before installation, but sure to remove the swarf trapped between the film and the coated surface to prevent scratching.

**NB.** Please ensure that you trim cut both ends of the material. Please allow for approximately 25mm each end to remove the powder coating jig hole and masking tape that may be applied during the production process.

Knotwood recommends the following cutting equipment for the best results:

- Compound Mitre Saw for crosscuts (i.e., docking and cutting to length) and mitre cuts.
- Table Saw for ripping lengthways.
- Jig Saw for cutting curves and cut outs.

For best results, place the saw on a level area away from pedestrian traffic and use in conjunction with a rolling track stand or cutting table.

When using a mitre saw, jig saw, or angle grinder ensure the extrusion is clamped securely.

Cutting angles and finishing trims, should be carried out with the material back or angle in the upwards position (inverted V).

Box sections and flat bar should cut with the largest face down.

After each cut the remove swarf from the saw blade, bed, table and material. Care must be taken when removing swarf to not scratch the materials surface coating.

### Cutting Wax

Use cutting wax to lubricate the blade. It increases cutting efficiency and extends the life of your blade by reducing friction and the amount of material that adheres to the blade gullets.

## Blades and Cutting Technique

### Mitre Saw

Select a tungsten carbide tip blade designed for cutting aluminium with a minimum of 60 teeth and a negative rake. The more teeth your blade has the finer the cut will be. Remember to check the blade specs to ensure you are using the correct rpm for your blade. The cutting speed used for wood is generally going to be too fast to safely cut aluminium. Cut slowly with a steady even pressure, don't force the blade, allow it to do the work.

### Table Saw

Select a tungsten carbide tip blade designed for cutting aluminium with a minimum of 60 teeth and a negative rake. Adjust the height of the blade so it is no more than 5-10mm above the height of the material you are cutting to help reduce kick back. Ensure the blade and stop are both parallel to the mitre slot. Push the aluminium through the saw in a slow steady manner with slight pressure keeping it tight against the fence or mitre gauge. Always use push sticks and stand to the side of the saw when you are making rip cuts.

### Jig Saw

Select a high-speed steel (HSS) jig saw blade designed for making curved cuts in aluminium with a medium tooth pitch (8 TPI / 3.0 mm). Select a lower speed setting on the jig saw then slowly guide it along your cut line with even pressure. A slower cutting speed will give you greater control over the jigsaw. Using too high a speed will likely cause the blade to overheat. This will reduce the life of your blade and could potentially damage the aluminium coating.

### Angle Grinder

Use a diamond metal cut off blade or 1mm reinforced cut off wheel designed for cutting aluminium. Make sure the flange and lock nut are set correctly for the blade you are using. Ensure the disc is used within its speed limitations (marked on the face of the disc). Position the grinder and move slowly through the metal with light pressure. Keep the depth of the cut to no more than twice the disc thickness. Avoid plunging the disc too far through the metal or pressing too hard which can cause the blade to grab and kick back.

### Treatment of cut edges

Cut edges should be coated in coastal areas or where cut ends are seen. Clean the edges with IPA or methylated spirits, then apply primer. Once the primer is dry apply touch up paint, if the edge is visible.

### Waste Material

All aluminium material is recyclable.



**Knotwood Australia**

07.3382.6000

[sales@knotwood.com.au](mailto:sales@knotwood.com.au)