TerraSmart®

Wet Pour Rubber Crumb

Installation Guide

Version 1.25

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Equipment

Mitre saw

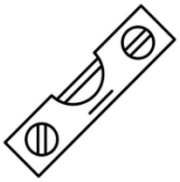
Equipped with a suitable blade for cutting aluminium

Tape measure

For measuring cut lengths

Level

Rotating laser level plus a standard level are recommended

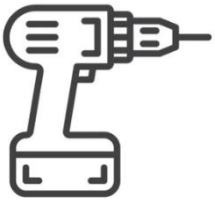


Angle grinder

Best for accurate cuts – circular saw will work

Cordless drill

With appropriate attachment and bits



Trowel

For best results, a double handled bullnose trowel is recommended

Knife

Handy for trimming the Stabilisation Mesh

Site PPE

Adhere to all relevant site regulations

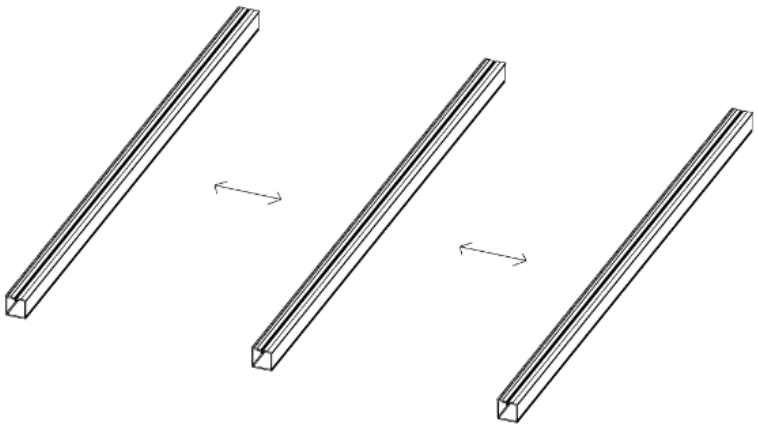
General Notes

- Leave 3mm gap between ends of Baseboard when butted end on end
- Where joists are to be butted end-on-end, ensure there is a support under the join connecting the two joists.
- Some schemes require a 10mm gap around perimeter edge of area
- Always use appropriate torque setting on cordless screwdriver for screws
- Always use the correct PPE throughout installation
- The binder is a powerful chemical – ensure correct PPE is worn when working with these products. Safety datasheets for the binders area available at www.rynosystems.com.
- Mixing details and application guidance is given on page 7
- The resin is moisture tolerant. However, it is important not to allow water into the mix when mixing the resin bound gravel kit. If you have a cover or an indoor area to mix, you should still be able to lay in moist conditions (not a downpour).

Installation Guide: Wet Pour Rubber Crumb System

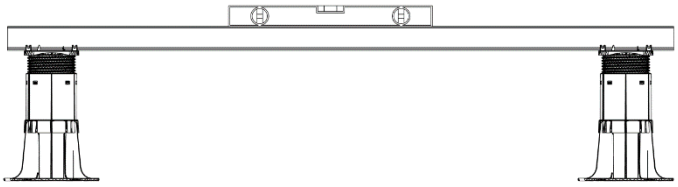
1. Lay joists out on substrate at required centres (as per Baseboard span as stated on datasheet [600-700mm]). **Fig A**

Fig A



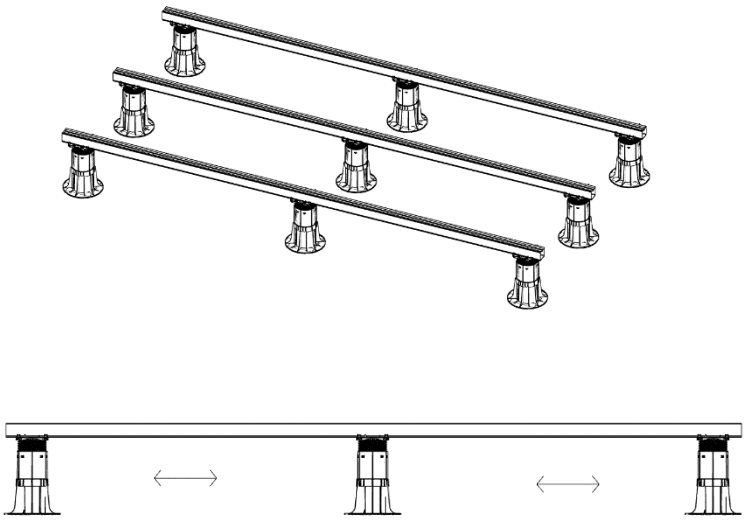
2. Lift joists on to pedestal supports at each end of joist and level up. **Fig B**

Fig B



3. Level all joists to the same level

4. Add intermediate supports at required centres along joist (as per joist span, see datasheet). **Fig C**

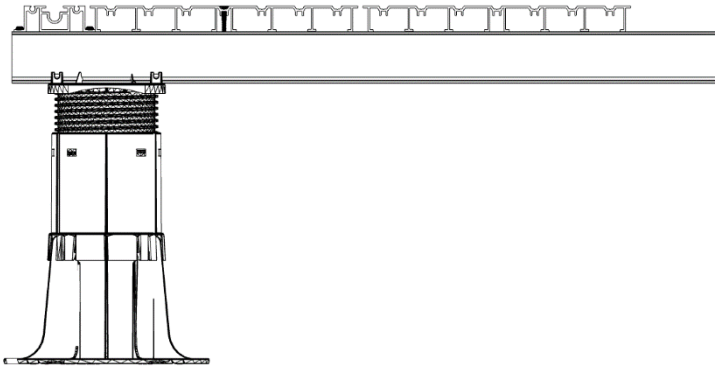


5. Where joists are to be butted end-on-end, ensure there is a support under the join connecting the two joists.

6. Once all joists are level and fully supported, establish where the first Baseboard will be laid

7. Fasten down Baseboards with BBS baseboard screws, using the recesses on the surface to ensure screw heads sit flush with the surface and not proud. Ensure at least 1 screw is fastened into each supporting joist. Leave a 5mm gap between each board to allow drainage. **Fig D**

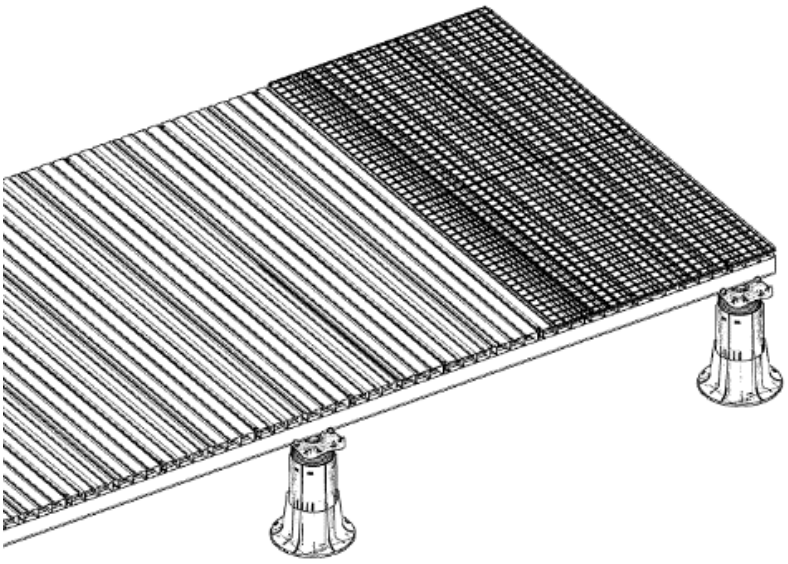
Fig D



8. Repeat step 7 until last board

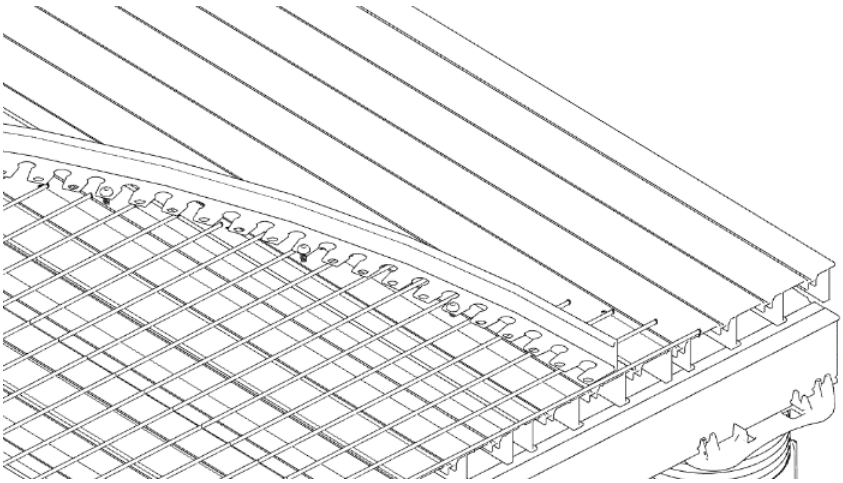
9. Installing the last Baseboard;
    a. If last board fits perfectly and does not require ripping down length, simply fasten board as per point 7
    b. If last board is wider than the space available, simply cut board down to required width before fastening down.

10. Once baseboard layer is complete, overlay the **SM-4** Stabilisation Mesh, trimming so there is none exposed at the edge of the area being laid. When you've prepared the substructure you can begin the mixing of crumb and binder (see details on page 7). **Fig F**



11. If Boundary Profile is being installed, fasted this down to the perimeter of the area using BBS baseboard screws, fixing at maximum 600mm centres. Fig G

Fig G



NB Fig G shows SM-25, a 25mm grid mesh. SM-4 has a 4x4mm fibreglass mesh

Got questions? Give us a shout.

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Mixing and Applying the Wet Pour Rubber Crumb Kit

General Notes

To create the most durable and long-lasting surface it is important that the area is dry, well drained and stable.

Wet Pour Rubber Crumb should not be laid in damp or cold conditions, 5^0c is the minimum temperature advised. Our PU Binders are moisture activated and any contact with moisture either through rainfall or existing damp surfaces during installation will cause the binder to react and cure much more quickly, resulting in potential problems with the finished surface.

The Wet Pour Rubber Surface is laid in two separate processes, firstly the base layer of the larger Black SBR Rubber Crumb (Fall Safe Variant only), which forms the shock pad of the surface. Followed by top coat, or wear layer.

The depth of the top layer is to be 20mm. Where Fall Safe variant is being installed, the base layer can be various depths depending on the fall height protection required. Specification assistance can be provided if not outlined in your delivery documents.

To mix the Rubber Crumb and Binder it is common practice to use a forced action pan or paddle mixer, which are widely available for hire on a daily or weekly basis.

Mixing specification

For the Base Layer we recommend a mixture ratio of minimum 10% PU Binder to Rubber 10 kilos of PU Binder per 100 kilos of SBR Rubber. NB Base layer is only used when installing the Fall Safe variant.

For the Top Layer we recommend a mixture ratio of minimum 20% PU Binder to Rubber 20 kilos of Binder per 100 kilos of Rubber Crumb.

Allow the material to mix for between 4-6 minutes per batch. Reducing this mixing time will result in the surface taking much longer to set. However, leaving it too long mixing will make it more difficult to spread so this timing is critical. When the batch has been mixing for the correct length of time, empty it from the mixer in to a wheel barrow and take it immediately to the site to be poured out and laid.

The mix should be trowelled evenly over the area to the required depth using a depth block and straight edge then lightly rolled to ensure a level surface. As the rubber crumb is obviously very adhesive at this point we advise continuously lubricating your trowels and rollers with smoothing agent (50/50 water and fairy liquid or white spirit.)

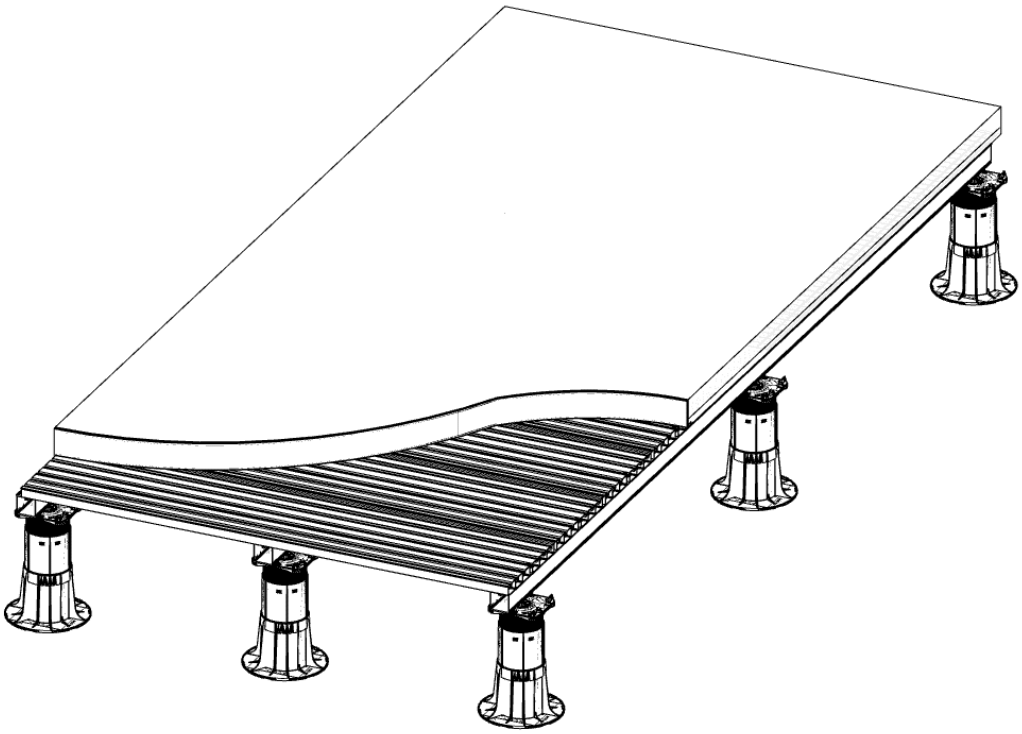
We recommend that you prime the baseboard and boundary profile as you work up to them with the rubber crumb. This will help to create a strong adhesion between the finished surface and the edging.

White Spirits may also be used to clean your tools once you've finished.

Once the base layer has cured (overnight for most areas) repeat the process using the EPDM for the wearing course.

12. Stand back and admire the finished product! The area should be ready to walk on within 24 hours but we recommend it not be used for 72 hours after completion. Fig H

Fig H



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Appendix A

Re: UV Discolouration of Aromatic Polyurethane Binders

This statement concerns UV "yellowing" effect which can occur on Wet Pour safety surfaces and has a temporary effect. All aromatic PU binders will yellow in exposure to UV light, this is a function of their chemistry and 99% of all playground surfaces are installed using this type of binder.
The alternative is to use Aliphatic non yellowing binders; however, these binders are a significant cost uplift. It should also be noted that this temporary issue is purely aesthetic and the integrity of the safety surface is not affected.

In the vast majority of cases this yellowing effect is not noticeable however, in certain weather conditions the thin film of binder which covers the very top granules will be noticeable.
If the colour of the granules is light (blue/grey/white is particularly problematic) then the yellow film can cause temporary surface discolouration (Blue surfaces will often appear Green). The layer of binder which causes this effect is Microns thin and the granules themselves are not discoloured – see below image:

This effect can be particularly noticeable when some areas are in the shade and others are exposed to direct UV light, see image below:

This discolouration is temporary and in some cases the colour will return to normal during the full curing process (2-3 weeks) and in other cases the discolouration will remain until the surface is in use, the thin film of binder on the top will then wear off and the surface will return to its original colour. It is usually possible to take a loose discoloured granule from the surface and scratch the surface to demonstrate this process.

It is not possible to say accurately how long this will take as it depends on the usage of the surface. If any questions are not covered in the statement above please reach out to discuss directly.

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