

BoundWorx® Application & Product Data Sheet

DESCRIPTION

Our Resin Bound system can be used on a number of new and existing hard surfaces.

In all cases, the surface must be clean, dry and free from contamination. All surfaces having Resin Bound laid on them must be strong enough to withstand the anticipated loadings.

If the surface needs to be SuDS compliant, and to get the full advantages of the Resin Bound system, the resin will need to be laid onto a permeable surface/substrate such as BoundBase, Permeable Concrete or Permeable Tarmac. We recommend BoundBase as the best option, as it is very permeable, strong, and reacts the same way in extreme weather conditions, since it's the same material as the Resin Bound system laid on top.

For detailed guidance on BoundBase application and base buildups, please see our BoundBase Application Data Sheet and Base Build Up data sheets.

The BoundBase system incorporates two layers of SRM mesh, one underneath and one on top, for reinforcement. When installing the Resin Bound system onto newly laid permeable concrete or tarmac bases, we recommend laying a layer of SRM mesh on top of the substrate before installing the resin. Overlap the mesh between 50 and 100 millimetres. This improves the overall strength of the system and helps reduce the likelihood of reflective cracking.

The best option is always to prepare and lay a new base rather than install over an existing surface. However, if this is not possible, we recommend using a premium overlay mesh instead. This is a different type of mesh designed to help delaminate the resin from the base and reduce the risk of reflective cracking. Please note that laying over an impermeable base will require additional maintenance, as dirt and moisture cannot wash through and may accumulate on the surface.

EDGING

You must always work to a solid edge. Ideally, granite setts or a solid edging stone should be used. We can supply straight or flexible aluminium edging strips if necessary. These can also be used for decorative designs and day joints.

Be aware that aluminium edging strips are not suitable for use as an edging detail where pedestrians or vehicles will walk or drive off an open edge.

MIXING OF THE RESIN AND AGGREGATE

Each unit consists of:

4 x 25kg bags kiln dried aggregate

1 x Part A (Resin)

1 x Part B (Curing Agent)

1 x 6.25kg kiln dried sand

Refer to the formulation email sent after you place your order for the specific aggregate ratios for your chosen blend.

You MUST use Forced Action Mixer with a minimum capacity of 120L

You MUST follow a consistent order for the mixing process. Step by step instructions as follows:

Add the 4 x 25kg bags to the Forced Action Mixer. Be sure to add the largest sized stone first.

Pour the Part B (Curing Agent) into the Part A (Resin). Mix thoroughly with a 110V Drill and Paddle mixer for 45 seconds. Ensure that there is a consistent colour in the resin. Take care to mix right to the bottom and into the corners of the bucket.

Mixing of the Resin (Part A) and Hardener (Part B) is a very important part of the process. Short cuts must NOT be taken.

Add the mixed resin to the aggregate in the Forced Action Mixer. Ensure all the resin has been removed from the container.

Allow the resin and aggregate to mix for 30 seconds and then slowly add the bag of sand.

Allow the materials to mix for a minimum of 2 minutes. Make sure each unit of material is mixed for the same amount of time. Maximum recommended mixing time is 3 minutes.

Be cautious not to over mix the materials to avoid colour variation and darkening of different mixes.

Empty the materials through the chute into a lined wheelbarrow and take it to the area where the material is being trowelled.

After repeating this mixing process 6 times, **turn the machine off and clean down your Forced Action Mixer.** See the "CLEANING MIXER" section for further instructions.

Do not turn the mixer off when it has a full unit of Resin Bound materials in it. This can cause the switch to break on the Forced Action Mixer over time. Empty the full mix as soon as the 2 minutes timer is up.

COVERAGE RATES

A full unit of resin bound materials will cover the following area per unit:

Depth Coverage

15mm 4.2m²

18mm 3.5m²

20mm 3.15m²

Please note: when using marble aggregates, coverage rates differ due to material density. The application rates per unit for marble are as follows:

Marble Depth Coverage

15mm 3.72m²

18mm 3.1m²

20mm 2.79m²

The formulation for your chosen finish will be indicated on the email sent to you on the date of despatch.

APPLICATION OF THE MATERIALS

Use a 120L wheelbarrow to ensure a full unit of Resin Bound materials fits once mixed. Empty the contents onto the surface, ready for trowelling. If using the piling method, ensure each pile of material is sized so that when spread to the correct depth, the troweller does not have to reach more than 400mm and certainly no more than 600mm. If using a pre-set sledge or screed box, fill it with material and pull it across the surface to release the product. Do not leave a gap between the newly laid material and the previously laid material, as this avoids having to move the material afterwards, saving time and effort.

Power floats can also be used to install resin bound materials. However, we recommend you have one of our onsite trainers present on the job for the day to show you the best practices and ensure a good finish when using a power float.

If the area cannot be completed in one day, form a day joint using the correct depth aluminium strip. The strip can either be left in the surface or removed the next day. If removed, a butt joint will be visible where the fresh material meets the already-cured section. Ensure the material is laid flush to the top of the trim.

Alternatively, prior to starting the installation process, divide the area into more manageable sections using a solid edging stone or similar.

TROWELLING TECHNIQUE

There are three distinct trowelling strokes used when laying resin bound materials, each serving a different purpose:

Levelling Stroke:

Once the resin bound material has been laid out, use your trowel with a heavy hand to move and flatten the material across the surface. This stroke begins to close off the stones and helps to disappear the joint between the newly laid material and the previously laid material.

Ensure the material is left flat without undulations, with a neat back edge at the specified depth for your application.

Pressure Stroke:

Using two hands on the trowel and applying your body weight through it, work the material to compact it and help close off the stones.

Finishing Stroke:

Using a hard, flat trowel action across the surface, finish the area. This stroke needs to be firm enough to remove any ridges or indents, but flat enough that it doesn't drag or open up the stones. Start by reaching further than the previous trowelling strokes and ensure you cover every square inch of the area.

All three strokes work together to progressively close off the stones and achieve a smooth, level, fully bound finish across the whole area laid at the correct depth.

Always work to a wet edge.

To learn a thorough trowelling technique we recommend our on-site training option.

CLEANING MIXER

The walls of the mixer should be cleaned every six mixes, and then the arms removed and scraped off. Ensure the mixer's delivery door, chute, centre shaft, and sides are cleaned with a square-ended trowel. This will prevent any cured material from jamming the gate of the mixer. Once the mixed aggregate has been emptied into the wheelbarrow, remove any residual material from the chute and the gate to keep it clear and free of build-up.

After the last mix of the day has been taken out the mixer use BoundWorx Easy Clean to wash the mixer out using a brush. Remove all resin and aggregate from all parts of the mixer in contact with resin that day. Once you have washed it back to clean metal apply more BoundWorx Easy Clean to the mixer drum and while its still wet dry it with blue tissue until the metal is dry and free of all sandy residue.

Please refer to the BoundWorx Easy Clean data sheets before using it to ensure safe use.

Please refer to the "Cleaning a Forced Action Mixer" guide for more detailed instructions

POT LIFE

The shelf life of unmixed BoundWorx® Part A is 24 months if stored above 5oC and not in direct sunlight.

The shelf life of unmixed BoundWorx® Part B is 6 months if stored above 5oC and not in direct sunlight.

CURING TIME

The curing times will vary depending on the temperature at the time of application, and any additional catalyst used. Typical cure times are as follows:

Average curing at 15°C for pedestrianised areas = 6 Hrs

Average curing at 15°C for trafficked areas = 24 Hrs

TEMPERATURE OF APPLICATION

Recommended temperature of application is between 5oC and 25oC.

Accelerators can be used to speed up cure times in a variety of situations. Please consult us for further advice should this be of interest.

PACKAGING

BoundWorx[®] resin is supplied in two containers. Part 'A' (Resin) and Part 'B' (Curing Agent).

Standard unit size is 7kg. Smaller units are available for patch repairs upon request.

CLEANING OF TOOLS AND HANDS

Tools, machinery etc, should be cleaned immediately after use with BoundWorx Easy Clean. Not white spirit. Avoid contact with skin and use organic hand cleaner on hands.

No naked flames should be used with BoundWorx Easy Clean it's a type of solvent cleaner.

HEALTH & SAFETY PRECAUTIONS

Before using these products please ensure you have been supplied and have read carefully the following:

1. Data sheet and method statement
2. Material Safety Data Sheet.

USEFUL HINTS

1. Read and re-read the safety data sheets to ensure that you have a clear picture of how you are going to work.
2. AGGREGATE MUST BE KEPT DRY. Please ensure that they are securely covered with Tarpaulin/DPM, off the ground – ideally on a pallet - or stored inside when delivered.
3. The working time of the mixed resin and aggregate is limited so you will need to work quickly. On a hot day, start work in the morning when temperatures are lower to maximise working time. Store materials in the shade.
4. To avoid resin sticking to the wheelbarrow use a DPM or pallet wrap to line the wheelbarrow. Secure with tape and discard after use.
5. ALWAYS tape the edges of the application area or seal edging with wet look sealer to avoid trowelling resin onto and staining any edging stones. Cover any walkways to avoid resin footprints staining those areas.
6. To ensure a consistent colour through each batch of material, ALWAYS add the aggregates in the same order and maintain a consistent mixing time. ALWAYS add bigger aggregates before smaller aggregates.
7. Set out each unit of material in advance in rows of 6 in the following order to avoid delays: sand at the bottom, 4 x 25kg bags aggregate, Part A, Part B at the top.
8. When mixing, add the aggregate to the machine on one side, and the mixed resin on the opposite side to prevent the top grill clogging.
9. ALWAYS work to a wet edge.
10. BoundWorx Easy Clean should be used to clean tools. Not White Spirit. Prepare a pot and paint brush in advance to use to clean your trowel occasionally while you're installing.
11. Wear protective clothing and a suitable padded pair of gloves for trowelling. Disposable gloves should be used when mixing. Change the gloves frequently to avoid sticking or staining of tools.

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The figures quoted do not constitute a specification, they represent typical values obtained for this product.