



RonaDeck Eco Tree Pit

Resin bound permeable tree pit system

Description

RonaDeck Eco Tree Pit is a resin bound natural aggregate finish surround for planted trees in public and private areas. Surrounding the tree in a solid yet semiflexible construction allows the tree to grow. Prevents a build up of litter and reduces trip hazards which are common with traditional metal tree grill systems.

The RonaDeck Eco Tree Pit comprises a two component UV stable polyurethane resin and a range of selected attractive aggregates. The design of this resin bound aggregate system provides a surface which is attractive, highly porous and able to receive light foot traffic.

Features

- **SuDS compliant - highly permeable**
- **UV stable - non yellowing resin**
- **natural aggregate appearance**
- **alternative to tree grilles**
- **installed by approved contractors**
- **design can accommodate some tree growth**
- **attractive finish**
- **low maintenance**
- **variety of colours - see separate colour chart**

Resin & Aggregate

RonaDeck Eco Tree Pit Resin has been designed for the UK market. Under normal UK weather conditions the system is considered UV light and heat resistant and will not discolour. If exposed to weather beyond those of typical UK conditions, slight discolouration may occur.

The performance and appearance of the finished surface is dependent on the aggregate used. RonaDeck Eco Tree Pit aggregates have been designed to achieve strength, resilience, porosity and decoration.

Some aggregates can contain small amounts of iron which can produce rust staining. This naturally occurring iron cannot be identified before use and Ronacrete cannot accept any responsibility for any loss or damage suffered as a result of staining.

Appearance

The appearance of RonaDeck Eco Tree Pit samples and materials are dependent on the colour, shade and grading of individual aggregates supplied to Ronacrete Ltd by its suppliers. Being largely natural aggregates, the appearance may be variable within batches and from batch to batch and uniformity of appearance should not be expected. RonaDeck Eco Tree Pit is hand finished with a steel float and some variation in finished levels is to be expected. Levels variation may be accentuated in certain natural and artificial light conditions, such as at sunrise or sunset or when lighting is set into the surfacing.

Slip Resistance

RonaDeck Eco Tree Pit has been tested for slip resistance in accordance with BS 8204-6:2008+A1:2010 Appendix B. Application of Clear Glass Grit 0.2 - 0.6mm will significantly increase the slip resistance of the surface in the wet.

Contractors

RonaDeck Eco Tree Pit is a specialist product and must only be applied by specialist applicators. Do not apply or allow it to be applied by contractors who do not possess the necessary skills and experience. You should consider appointing a Ronacrete Ltd Approved Contractor.

Maintenance

It is possible to repair localised damage by cutting out and replacing, ideally using the same aggregate as originally supplied. Ageing and weathering of the original may prevent an invisible repair. "Picking out" of some stones is possible but is likely to be minimal and localised. Any major loss of stone should be reported.

Blooming

Blooming occurs, largely in late Autumn, Winter and early Spring, when conditions for application of resins are not ideal. Polyurethane resins may harden quickly but even at 20°C, initial cure does not occur until 24 hours have elapsed and initial cure takes longer at lower temperatures. Initial cure time is important because until it is achieved, the resin remains open to absorption of water. On dry days with air temperatures in excess of 10°C, conditions may seem benign but such conditions can produce blooming. Condensation occurs when the dew point is close to the air temperature and whenever the dew point rises to within 3 degrees of air temperature, condensation will occur. Application of resins during these adverse conditions, or for 2 days following application if conditions remain similar or worsen, runs the risk of blooming caused by dew forming on the resin surface or fog condensing on the surface.

Application Conditions

Application during rain or before rain is not recommended. Light rain on the surface affect the bond between particles, reducing the strength of the system. Note that application to a damp substrate will reduce bond strength. Unmixed aggregate must be kept dry at all times. Care must be taken to keep the mixing station dry, thus avoiding entrapment of moisture between aggregate and resin. Do not apply RonaDeck Eco Tree Pit when rain is expected within 24 hours of application at 20°C. Do not apply RonaDeck Eco Tree Pit when fog, frost or dew is expected within 48 hours of application.

Mix Design & Coverage

RonaDeck Eco Tree Pit Resin*	6kg
RonaDeck Eco Tree Pit Aggregate	100kg
RonaDeck Fine Aggregate (sand)	6.25kg

Coverage per batch (approx.) 1.65m² @ 40mm

* RonaDeck Eco Tree Pit Resin is a two component product. The total weight of Part A & Part B combined is 6kg

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Working Times and Temperatures

Working time is affected by temperature; at temperatures above the maximum recommended in the following tables, the pot life and working time may be insufficient to allow a wet edge to be maintained. Work should therefore not proceed when product and / or air temperature exceeds recommendations. The air temperature must therefore be monitored during application and work should stop when temperature exceeds recommendations.

Care must be taken to keep materials as cool as possible in warm weather. At low temperatures RonaDeck Resin will not flow sufficiently to achieve a smooth finish and work should not proceed when air, material or substrate temperature is below 5°C.

Winter Grade (5°C-15°C)		
Temperature	5°C	15°C
Working Time	40-60 mins	20-30 mins
Lay before rain	3-4 hrs	1-2 hrs
Pedestrian traffic	12-14 hrs	5-7 hrs

Mid Winter Grade (10°C-20°C)		
Temperature	10°C	20°C
Working Time	30-50 mins	15-20 mins
Lay before rain	3-4 hrs	1-2 hrs
Pedestrian traffic	9-12 hrs	5-7 hrs

Summer Grade (15°C-25°C)		
Temperature	15°C	25°C
Working Time	50-60 mins	35-50 mins
Lay before rain	6-8 hrs	3-4 hrs
Pedestrian traffic	24 hrs	9-12 hrs

High Summer Grade (25°C-40°C)		
Temperature	25°C	40°C
Working Time	55-90 mins	30-45 mins
Lay before rain	5-6 hrs	2-4 hrs
Pedestrian traffic	24 hrs	7-8 hrs

Site conditions will affect the times quoted. All data is provided as a guide only.

Instructions for Use

Base

1. Only use clean, kiln-dried, well graded aggregates which are suitable for this use.
2. The mixing station must be dry, to avoid entrapment of moisture in the aggregate. Even a small amount of moisture in the aggregate will cause foaming of the resin. Do not apply during rainfall or when rain is expected during the initial curing period.
3. Soil is to be well compacted and above the level of the root ball.
4. Lay minimum 100mm depth of 20mm loose shingle or MOT Type 3 aggregate and compact. Form a rising funnel of aggregate around the tree trunk. Allow for a minimum 40mm thickness of RonaDeck Eco Tree Pit to the compacted aggregate.
5. Where required, form a solid perimeter using timber, kerbing, blocks or similar to create a permanent and secure edging for the loose gravel base and the RonaDeck Eco Tree Pit.

Mixing

6. Ensure the forced action mixer is thoroughly cleaned immediately before works proceed as dirt/residue on the drum and mixing blade surfaces may contaminate the initial mixes. This contamination will affect the colour of the initial mixes, which will be noticeable when subsequent batches of material are laid.
7. Place RonaDeck Eco Tree Pit Aggregate into a clean, dry, forced action mixer. When using 6kg resin packs, it is important to mix all the resin with the required amount of aggregate (106.25kg), this will require a forced action mixer of at least 120 litre capacity, Baron F200 or similar.
8. Scrape all of the contents of RonaDeck Eco Tree Pit B component into the larger A component container and mix with a slow speed drill (≤ 450 RPM) and MR2 paddle mixer attachment until homogeneous.
9. Immediately add the mixed resin to the aggregate in the mixer followed by RonaDeck Fine Aggregate (6.25kg) approximately 30 seconds later. Mix the aggregate and resin together until all the aggregate is evenly coated with resin. Mix for approximately 1-2 minutes. Overmixing will increase heat generation, reduce working time and may affect the colour. **Inconsistent mixing times may cause colour variation, ensure all batches are mixed for the same length of time.**

Application

10. Discharge the mixed resin and aggregate into a suitable wheelbarrow and immediately move to the point of application
11. Discharge the wheelbarrow onto the prepared surface and spread evenly using a straight bladed squeegee or spazzle to the required thickness and level.
12. The surface is then to be hand trowelled with a suitable float to leave a smooth compacted finish. Excessive compaction will reduce permeability and over trowelling may result in 'trowel burn'.

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13. RonaDeck Tool Cleaner should be used if required, the use of white spirit is not advised.
14. For improved slip-resistance, apply Clear Glass Grit 0.2-0.6mm to the wet resin at the rate of approximately 50-80g/m², avoid a patchy appearance by scattering evenly.
15. Always ensure that a wet edge is maintained, joints between mixes will be visible unless the older mix is still workable.

Curing

Allow to cure and open to traffic as described in “**Working Times and Temperatures**”.

Cleaning Tools

Tools and equipment may be cleaned with RonaDeck Tool Cleaner, which will remove uncured resin.

Shelf Life and Storage

Shelf life of RonaDeck Eco Tree Pit Resin is 6 months, aggregates have an unlimited shelf life. Store materials in clean, dry, frost free warehouse conditions between 5°C and 25°C. Protect from sunlight.

Health and Safety

Refer to Safety Data Sheet.

Site Attendance

When on site Ronacrete Ltd representatives are able to give a general indication of the correct method of installing a Ronacrete Ltd product. It must be remembered that Ronacrete Ltd is a manufacturer and it is therefore the responsibility of the contractor and his employer to ensure he is aware of and implements the correct practices and procedures to ensure the correct installation of the product and that liability for its correct installation lies with the contractor and not with Ronacrete Ltd.

The information detailed in this leaflet is liable to modification from time to time in the light of experience and of normal product application, and before using, customers are advised to check with Ronacrete Ltd, quoting the reference number, that they possess the latest issue. Any person or company using the product without first making further enquiries as to the suitability of the product for the intended use does so at his own risk, and Ronacrete Ltd can accept no responsibility for the performance of the product, or for any loss or damage arising out of such use.