

RonaDeck Resin Bound Surfacing

Resin bound permeable paving for pedestrian and vehicle traffic



FEATURES

- aliphatic resin will not deteriorate or discolour when exposed to UV light
- high slip resistance—tested to BS 8204-6:2008+A1:2010 Appendix B
- SuDS compliant
- highly permeable—up to 850 litres / m² / minute
- 38% of resin formulated from a botanic source
- product warranty up to 15 years available
- natural appearance
- suitable for pool surrounds, pathways, driveways and car parks
- low maintenance
- variety of colours

Description

RonaDeck Resin Bound Surfacing is a resin bound aggregate surface for pedestrian and vehicular traffic. RonaDeck Resin Bound surfaces are decorative and functional, seamless and slightly flexible.

The open matrix allows water to drain through to the base, eliminating water ponding and allowing water to drain to planted areas or land drains. The surfacing may be applied to SuDS compliant bases and sub-bases, reducing the impact of urban development on flood risk and allowing water to flow into water courses. Edgings created from brick, stone, timber or steel should be installed to retain and protect the resin bound surfacing.

RonaDeck Resin Bound Surfacing is a two component polyurethane resin which binds a range of selected decorative kiln-dried aggregates. RonaDeck Resin Bound Surfacing provides an attractive porous surface which is strong enough for foot and light vehicle traffic.

Traffic and Scuffing

RonaDeck Resin Bound Surfacing is designed for foot traffic and occasional vehicle traffic such as on domestic driveways, residential developments with light domestic traffic or car parking bays. It is however, not a road surface for heavy volumes of domestic or commercial traffic. Heavier vehicle traffic, including heavy impact and high point loading will damage the surface and may result in failure.

Due to the destructive scuffing forces created by power steering (e.g. three point turns) in car parks or on driveways where cars will repeatedly turn within a confined area, localised wear is more likely. It is therefore recommended that when the product is used in such locations, the surface is regularly inspected by the client or installer and maintained as required.

Resin and Aggregate

RonaDeck Resin Bound Surfacing Resin is UV resistant resin and will not yellow on exposure to UV light. This is a more attractive option than other types of resin

RonaDeck Resin Bound Surfacing

Resin bound permeable paving for pedestrian and vehicle traffic

Resin and Aggregate (continued)

which can yellow and dramatically alter the appearance of the finished surface. The resin is formulated using aliphatic HDI which will not deteriorate or become brittle when exposed to UV light.

The performance and appearance of the finished surface is dependent on the aggregate used. The RonaDeck Resin Bound Surfacing Aggregate blends have been designed to achieve strength, resilience, porosity and decoration.

Natural aggregates may contain small amounts of iron which can produce rust staining when exposed to air and water; standard RonaDeck Resin Bound Surfacing blends contain aggregates selected for infrequency of incidence of staining but iron may be present in any natural aggregate. The presence of iron cannot be identified before use and Ronacrete Ltd cannot accept responsibility for any loss or damage suffered as a result of staining.

Appearance

The appearance of RonaDeck Resin Bound Surfacing 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. Darker aggregate blends are less likely to show tyre marks. RonaDeck Resin Bound Surfacing 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.

Design of Edgings

Edgings should be securely fixed to prevent movement. A flexible joint filler should be used at edgings where there is potential for movement, to separate the surfacing from the edging.

Compaction of the Construction

Adequate compaction of the sub-base and base is essential to prevent cracking of the base, a minimum 1 tonne "sit on" roller should be used when possible and the contractor must ensure that the construction is fully restrained at all edges to ensure dimensional stability.

Reflective Cracking & Differential Movement

Angular intrusions into resin bound surfacing by walls; edgings etc may cause formation of reflective cracks in the surfacing. Intrusions into the surfacing should be avoided whenever possible and when unavoidable, intrusions should be curved rather than angular. Cracking of the base is likely to result in cracking of the resin bound surfacing. Application to different types of base materials in the same area of paving should be avoided, when this is not possible, allowance should be made for differential movement between differing types of base, to prevent cracking of the surfacing.

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.

Resin Bound and Bonded Surfacing

Continued on following page...

RonaDeck Resin Bound Surfacing

Resin bound permeable paving for pedestrian and vehicle traffic

Slip Resistance

All RonaDeck Resin Bound Surfacing aggregate blends have been tested for slip resistance in accordance with BS 8204-6:2008+A1:2010 Appendix B. All aggregate blends achieved 'low potential for slip' in dry conditions. In wet conditions, test results for Autumn Forest blend marginally fell into the medium potential for slip range, testing of all other blends continued to show low potential for slip. Slip Resistance Values for all RonaDeck Resin Bound Surfacing blends can be found on pages 7 and 8 of this document. Application of RonaDeck Resin Bound Surfacing System Anti-Slip Aggregate will significantly increase the slip resistance of the surface in the wet and on steep gradients without substantial change to appearance.

Contractors

RonaDeck Resin Bound Surfacing System 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.

Suggested Construction for Footpaths

RonaDeck Resin Bound Surfacing

RonaDeck Resin Bound Surfacing blend minimum 15mm thickness with optional RonaDeck Resin Bound Surfacing Anti-Slip Aggregate

Binder Course

60mm minimum depth of AC14 open graded asphalt concrete (macadam) maximum 100/150 pen binder to BS EN 13108-1.

Granular Sub-base

175mm minimum well compacted Type 3 granular sub-base or similar approved

Optional Impermeable Membrane

Impermeable membrane to carry water to infiltration/storage system
or

Optional Geotextile Layer

Geotextile layer to prevent upward migration of soil

Capping Layer

If required, depending on sub-grade condition

Sub-grade

Suggested Construction for Driveways

RonaDeck Resin Bound Surfacing

RonaDeck Resin Bound Surfacing blend minimum 15mm thickness with optional RonaDeck Resin Bound Surfacing Anti-Slip Aggregate

Binder Course

80mm minimum depth of AC14 open graded asphalt concrete (macadam) maximum 100/150 pen binder to BS EN 13108-1.

Granular Sub-base

200mm minimum well compacted Type 3 granular sub-base

RonaDeck Resin Bound Surfacing

Resin bound permeable paving for pedestrian and vehicle traffic

Suggested Construction for Driveways (continued)

or similar approved

Optional Impermeable Membrane

Impermeable membrane to carry water to infiltration/storage system
or

Optional Geotextile Layer

Geotextile layer to prevent upward migration of soil

Capping Layer

If required, depending on sub-grade condition

Sub-grade

Suggested Construction for Car Parks suitable for cars & light delivery vehicles

RonaDeck Resin Bound Surfacing

RonaDeck Resin Bound Surfacing blend minimum 18mm thickness with optional RonaDeck Resin Bound Surfacing Anti-Slip Aggregate

Binder Course

100mm minimum depth of AC14 open graded asphalt concrete (macadam) maximum 70/100 pen binder to BS EN 13108-1.

Granular Sub-base

300mm minimum well compacted Type 3 granular sub-base or similar approved

Optional Impermeable Membrane

Impermeable membrane to carry water to infiltration/storage system
or

Optional Geotextile Layer

Geotextile layer to prevent upward migration of soil

Capping Layer

If required, depending on sub-grade condition

Sub-grade

The above information is produced for guidance only, the designer/ contractor should be satisfied that the construction is suitable for the expected traffic and ground conditions. Guidance about thickness and type of asphalt concrete has been provided by an asphalt supplier and while due care has been taken to ensure the information is correct, it is not the responsibility of Ronacrete Limited to design this or any other element of the construction.

Mix Design

| | |
|---|-----------------|
| RonaDeck Resin Bound Surfacing Resin | 7.5kg |
| RonaDeck Resin Bound Surfacing Aggregate | 106.25kg |

Coverage

Coverage rates for individual blends can be found on pages 7 and 8 of this document. Coverage is based on application to a smooth flat surface and will vary when applied to undulating surfaces, according to compaction, and to the aggregate grading, which can change from batch to batch.

RonaDeck Resin Bound Surfacing

Resin bound permeable paving for pedestrian and vehicle traffic

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 Bound Surfacing 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.

- 5°C-15°C Winter Grade resin should be used.
- 15°C-25°C Summer Grade resin should be used.
- 25°C-40°C High Summer Grade resin should be used.

Winter Grade

| Ambient Temperature | 5°C | 10°C | 15°C |
|--------------------------|---------------|---------------|---------------|
| Working Time | 40-60 minutes | 30-45 minutes | 20-30 minutes |
| Lay before rain | 3-4 hours | 2-3 hours | 1-2 hours |
| Pedestrian traffic after | 12-14 hours | 7-9 hours | 5-7 hours |
| Vehicle traffic after | 1-2 days | 24 hours | 15-17 hours |

Summer Grade

| Ambient Temperature | 15°C | 20°C | 25°C |
|--------------------------|---------------|---------------|---------------|
| Working Time | 50-60 minutes | 40-55 minutes | 35-50 minutes |
| Lay before rain | 6-8 hours | 4-5 hours | 3-4 hours |
| Pedestrian traffic after | 24 hours | 13-14 hours | 9-12 hours |
| Vehicle traffic after | 2-3 days | 1-2 days | 1-2 days |

High Summer Grade

| Ambient Temperature | 25°C | 30°C | 40°C |
|--------------------------|---------------|---------------|---------------|
| Working Time | 55-90 minutes | 45-75 minutes | 30-45 minutes |
| Lay before rain | 5-6 hours | 4-5 hours | 2-4 hours |
| Pedestrian traffic after | 24 hours | 14-16 hours | 7-8 hours |
| Vehicle traffic after | 2-3 days | 1-2 days | 24 hours |

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

Instructions for Use

1. New asphalt concrete should be left to cool and gain strength before application of RonaDeck Resin Bound Surfacing.
2. The surface of the asphalt concrete must be clean, dry and free from loose materials.

Resin Bound and Bonded Surfacing

Continued on following page...

RonaDeck Resin Bound Surfacing

Resin bound permeable paving for pedestrian and vehicle traffic

Instructions for Use (continued)

3. Ensure that the mixing station is fully waterproof when rain is expected, discontinue mixing when fog or mist are anticipated. Light rain on the surface of the system is unlikely to damage or affect the surface, see later reference to application in rainy conditions.
4. Place RonaDeck Resin Bound Surfacing Aggregate into a clean, dry, forced action mixer minimum capacity/ power 120 litres/ 1.8kW, Baron E200 mixer or similar.
5. Scrape all of the contents of RonaDeck Resin Bound Surfacing B component into the larger A component container and mix with a drill and helical paddle mixer attachment for 30-45 seconds. Keep mixing time to a minimum to avoid a build up of heat.
6. Immediately add the mixed resin to the aggregate in the mixer. Mix the aggregate and resin together until all the aggregate is evenly coated with resin. Keep mixing time to a minimum to avoid a build up of heat. Mixing time should not exceed 4 minutes. Over mixing can lead to darkening of the system.
7. Discharge the mixed resin and aggregate onto the prepared surface, level and smooth. Excessive compaction will reduce permeability.
8. Finish the surface with a suitable float.
9. If required, immediately cast RonaDeck Resin Bound Surfacing Anti-Slip Aggregate onto the top surface of the wet resin and aggregate, at the rate of approximately 0.1kg/m². Ensure even coverage to prevent a patchy appearance.
10. Allow to cure and open to traffic as described in Physical Properties.

Rain During Application

Light rain on the surface of the system is unlikely to cause damage to or affect the surface. Heavy rain is likely to spoil the appearance of the surface. Very heavy rain could wash out resin and aggregate. Therefore application during rain or when rain is anticipated during the cure period is not recommended (see Physical Properties on page 5). Care must be taken to keep the mixing station dry, thus avoiding entrapment of moisture between aggregate and resin.

Shelf Life and Storage

Shelf life of RonaDeck Resin Bound Surfacing 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

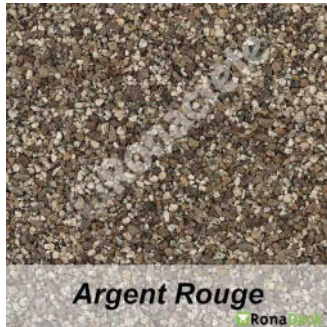
Refer to Safety Data Sheet.

Site Attendance

When on site Ronacrete Ltd representatives are able, if asked, to give a general indication of the correct method of installing an Ronacrete Ltd product. It is important to bear in mind that Ronacrete Ltd is a manufacturer and not an application contractor 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.

RonaDeck Resin Bound Surfacing

Resin bound permeable paving for pedestrian and vehicle traffic



Argent Rouge

| | |
|-----------|--|
| SRV (dry) | 54 (low risk) |
| SRV (wet) | 46 (low risk) |
| Density | 1550kg/m ³ |
| Coverage | 4.59m ² @ 15mm 3.83m ² @ 18mm |



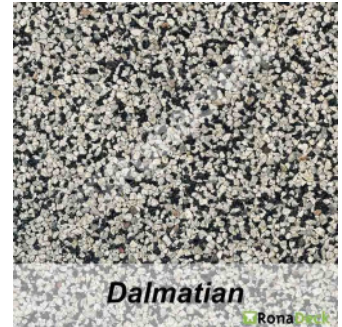
Autumn Forest

| | |
|-----------|--|
| SRV (dry) | 50 (low risk) |
| SRV (wet) | 34 (medium risk) |
| Density | 1750kg/m ³ |
| Coverage | 4.07m ² @ 15mm 3.39m ² @ 18mm |



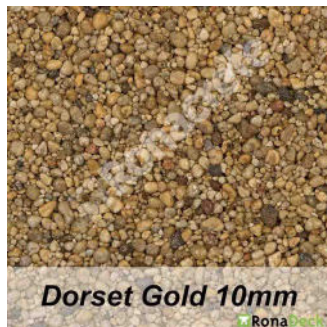
Aztec Gold

| | |
|-----------|--|
| SRV (dry) | 48 (low risk) |
| SRV (wet) | 37 (low risk) |
| Density | 1675kg/m ³ |
| Coverage | 4.25m ² @ 15mm 3.54m ² @ 18mm |



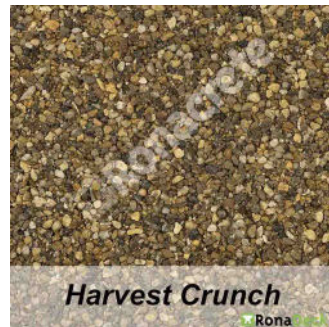
Dalmatian

| | |
|-----------|--|
| SRV (dry) | 55 (low risk) |
| SRV (wet) | 45 (low risk) |
| Density | 1430kg/m ³ |
| Coverage | 4.98m ² @ 15mm 4.15m ² @ 18mm |



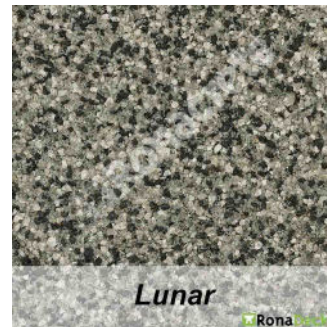
Dorset Gold 10mm

| | |
|-----------|---------------------------|
| SRV (dry) | 45 (low risk) |
| SRV (wet) | 37 (low risk) |
| Density | 1735kg/m ³ |
| Coverage | 2.45m ² @ 25mm |



Harvest Crunch

| | |
|-----------|--|
| SRV (dry) | 50 (low risk) |
| SRV (wet) | 39 (low risk) |
| Density | 1700kg/m ³ |
| Coverage | 4.19m ² @ 15mm 3.49m ² @ 18mm |



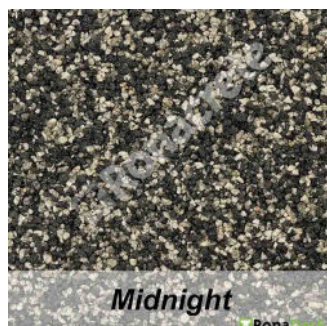
Lunar

| | |
|-----------|--|
| SRV (dry) | 55 (low risk) |
| SRV (wet) | 47 (low risk) |
| Density | 1650kg/m ³ |
| Coverage | 4.31m ² @ 15mm 3.59m ² @ 18mm |



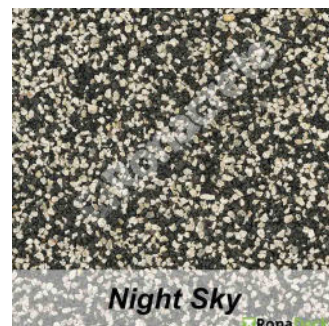
Maple Glow

| | |
|-----------|--|
| SRV (dry) | 55 (low risk) |
| SRV (wet) | 48 (low risk) |
| Density | 1650kg/m ³ |
| Coverage | 4.31m ² @ 15mm 3.59m ² @ 18mm |



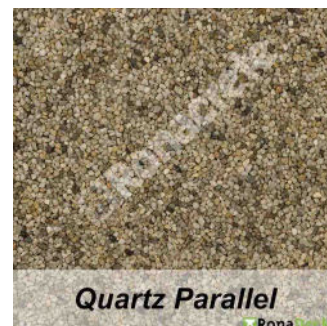
Midnight

| | |
|-----------|--|
| SRV (dry) | 52 (low risk) |
| SRV (wet) | 47 (low risk) |
| Density | 1625kg/m ³ |
| Coverage | 4.38m ² @ 15mm 3.65m ² @ 18mm |



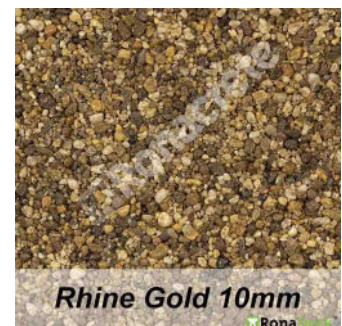
Night Sky

| | |
|-----------|--|
| SRV (dry) | 59 (low risk) |
| SRV (wet) | 47 (low risk) |
| Density | 1424kg/m ³ |
| Coverage | 5.00m ² @ 15mm 4.17m ² @ 18mm |



Quartz Parallel

| | |
|-----------|--|
| SRV (dry) | 56 (low risk) |
| SRV (wet) | 44 (low risk) |
| Density | 1685kg/m ³ |
| Coverage | 4.22m ² @ 15mm 3.52m ² @ 18mm |



Rhine Gold 10mm

| | |
|-----------|---------------------------|
| SRV (dry) | 50 (low risk) |
| SRV (wet) | 39 (low risk) |
| Density | 1751kg/m ³ |
| Coverage | 2.43m ² @ 25mm |

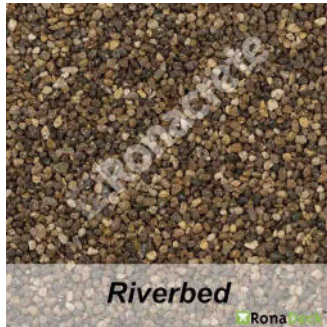
Resin Bound and Bonded Surfacing

Continued on following page...

Other Ranges—Concrete Repair and Coatings, Screeds, Waterproofing and Tanking, and, Flooring and Bedding

RonaDeck Resin Bound Surfacing

Resin bound permeable paving for pedestrian and vehicle traffic



Riverbed

| | |
|-----------|--|
| SRV (dry) | 52 (low risk) |
| SRV (wet) | 40 (low risk) |
| Density | 1675kg/m ³ |
| Coverage | 4.25m ² @ 15mm 3.54m ² @ 18mm |



Rouge Blanc

| | |
|-----------|--|
| SRV (dry) | 48 (low risk) |
| SRV (wet) | 44 (low risk) |
| Density | 1450kg/m ³ |
| Coverage | 4.91m ² @ 15mm 4.10m ² @ 18mm |



Rouge

| | |
|-----------|--|
| SRV (dry) | 55 (low risk) |
| SRV (wet) | 46 (low risk) |
| Density | 1500kg/m ³ |
| Coverage | 4.75m ² @ 15mm 3.96m ² @ 18mm |



Rustic Bronze

| | |
|-----------|--|
| SRV (dry) | 56 (low risk) |
| SRV (wet) | 43 (low risk) |
| Density | 1650kg/m ³ |
| Coverage | 4.31m ² @ 15mm 3.59m ² @ 18mm |



Silver Granite 10mm

| | |
|-----------|---------------------------|
| SRV (dry) | 54 (low risk) |
| SRV (wet) | 44 (low risk) |
| Density | 1756kg/m ³ |
| Coverage | 2.42m ² @ 25mm |



Silver Moon

| | |
|-----------|--|
| SRV (dry) | 55 (low risk) |
| SRV (wet) | 50 (low risk) |
| Density | 1575kg/m ³ |
| Coverage | 4.52m ² @ 15mm 3.76m ² @ 18mm |



Terracotta 10mm

| | |
|-----------|---------------------------|
| SRV (dry) | 55 (low risk) |
| SRV (wet) | 46 (low risk) |
| Density | 1563kg/m ³ |
| Coverage | 2.72m ² @ 25mm |



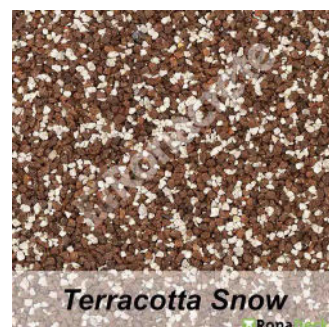
Terracotta Gold

| | |
|-----------|--|
| SRV (dry) | 46 (low risk) |
| SRV (wet) | 40 (low risk) |
| Density | 1603kg/m ³ |
| Coverage | 4.44m ² @ 15mm 3.70m ² @ 18mm |



Terracotta Medium

| | |
|-----------|--|
| SRV (dry) | 51 (low risk) |
| SRV (wet) | 40 (low risk) |
| Density | 1633kg/m ³ |
| Coverage | 4.36m ² @ 15mm 3.63m ² @ 18mm |



Terracotta Snow

| | |
|-----------|--|
| SRV (dry) | 50 (low risk) |
| SRV (wet) | 42 (low risk) |
| Density | 1482kg/m ³ |
| Coverage | 4.80m ² @ 15mm 4.00m ² @ 18mm |

All RonaDeck Resin Bound Surfacing aggregate blends have been tested for slip resistance in accordance with BS 8204-6:2008+A1:2010 Appendix B. The slip resistant values shown above were obtained in laboratory conditions. Results obtained on site may differ.

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.