Terraludis resin-bound stone – TL-Stone2800 system

For installers.

1 System description

Seamless, permeable resin-bound stone surface: washed and dried natural aggregates bound with TL-Stone2800 resin, a 100% aliphatic, polyaspartic-modified, 100% solids polyurethane that does not yellow.

Uses — footpaths and pedestrian terraces, pool surrounds, forecourts and tree pits, public spaces, light-vehicle access depending on thickness and substrate.

2 System build-up, in section

Edge, transition and expansion profiles.

Anti-slip dressing — optional.

Resin-bound stone layer
TL-Stone2800 resin + natural aggregates.

Bonding primer.

Substrate
Concrete slab or stable asphalt.

From bottom to top: substrate, primer, resin-bound stone, dressing, profiles.

3 Substrate

- Sound concrete slab more than 30 days old, or stable, load-bearing asphalt.
- Substrate moisture below 4%, no rising damp.
- Flatness: 3 mm maximum under a 1 m straightedge.
- Minimum fall: 1.5%, provided by the substrate.
- Preparation: grinding or shot blasting, removal of laitance, grease and moss, dust removal. Cracks opened up and filled with resin mortar, then primer on repaired areas.
- Light vehicles: concrete slab 150 mm minimum, or 60 to 70 mm asphalt on compacted aggregate.

4 Thicknesses

Use	Thickness	Recommended grading
Pedestrian and decorative	**15-20 mm**	2-4 mm
Heavy pedestrian use	**20-25 mm**	2-4 mm + 1-3 mm
General outdoor use	**20-30 mm**	2-4 mm + 1-3 mm
Light vehicles, on a stable structural base	**25-30 mm**	Quartz vehicle blend

Note — Indicative thicknesses, the same on flat and sloping areas; they are not a structural specification.

5 Application conditions

Temperature from +5 °C to +30 °C.

No rain or water before full cure.

Substrate at least 3 °C above dew point.

Not on concrete less than 30 days old or on actively damp substrates.

6 Resin ratio

Smooth natural aggregate	**5 to 6%**
Porous or irregular aggregate, or vehicle blend	**6 to 7%**

Percentages by weight of aggregate.

A / B mixing ratio — 100 / 82 by weight.
20 kg kit = A 10.99 kg + B 9.01 kg.
Resin consumption — 0.8 to 1.5 kg/m² per cm of thickness.

7 Recommended blend and typical batches

Use	Aggregate blend	Total resin	Component A	Component B
Vehicle, 7%	3 × 25 kg bags of 2-4 quartz + 1 × 25 kg bag of 1-3 + 5 kg of dry quartz sand 0.4-0.8 mm, i.e. 105 kg	**7.35 kg**	4.04 kg	3.31 kg
Heavy pedestrian, 6%	Same blend, 105 kg	**6.30 kg**	3.46 kg	2.84 kg
Pedestrian, 5.5%	4 × 25 kg bags of 2-4 mm, i.e. 100 kg	**5.50 kg**	3.02 kg	2.48 kg

Note — Quartz sand increases density and load-bearing capacity; it slightly reduces drainage. A 20 kg kit binds about 285 kg of aggregate at 7% and 330 kg at 6%.

8 Mixing

1. Stir components A and B separately at low speed.
2. Weigh A and B as per the table, pour B into A and mix for at least 3 minutes with an electric paddle mixer.
3. Load the dry aggregate and sand into a planetary mixer — the same equipment as for playground wet-pour. **No drum concrete mixer.**
4. Add the mixed resin and mix until every grain is evenly coated, about 2 to 3 minutes.
5. In cold or damp weather: add the catalyst (0.5 kg per 20 kg kit, pro rata to the batch) and mix for 2 more minutes.
6. Discharge and lay immediately: **working time 15 to 25 minutes at 20 °C.**

9 Laying

- Roller-apply primer on a clean, dry substrate.
- Fix edge, transition and expansion profiles before laying.
- Spread between screed rails to the specified thickness, compact and finish with a stainless trowel without overworking (overtrowelling brings the resin to the surface).
- Optional anti-slip dressing on the fresh surface.
- On slopes: work in cross bands starting from the bottom.

10 Health and safety — Refer to the safety data sheet (SDS) for each component.

11 Complementary products

Product	Purpose	Material	Heights
Edge profile (angle)	Finishes free edges — resin-bound stone must never end in a feather edge	Aluminium or stainless steel	15, 20, 25, 30 mm
Transition profile	Separates two colours, pedestrian and vehicle areas, or another surface (paving, asphalt, door threshold)	Aluminium or stainless steel	15, 20, 25, 30 mm
Expansion joint profile	Placed directly over every slab joint and crack, and to divide large areas into bays	Aluminium or stainless steel with flexible insert, or polyurethane sealant	To suit thickness
Bonding primer	Adhesion to the substrate	–	–
TL-Stone2800 catalyst	Speeds up curing in cold or damp weather	0.5 kg bottle	–
Anti-slip dressing	Grip in wet areas (pool surrounds)	Fine glass or corundum	–

12 Expansion joints and bays

- Carry every slab joint (contraction, expansion, construction) and every treated crack through the resin-bound layer.
- On large concrete slabs: at least one expansion joint every 25 m², i.e. bays of about 5 × 5 m.
- A joint at every re-entrant corner, around manholes and tree pits.
- On asphalt: seamless surface, no joints.

13 Properties of the cured system

- Adhesion to concrete 3.2 MPa.
- High abrasion resistance; does not yellow under UV.
- Resistant to water and freeze–thaw cycles; thermal stability from −20 °C to +70 °C.
- Permeable surface; light traffic depending on thickness.
- Indicative return to use: pedestrians after about 24 h, vehicles after 24 to 48 h depending on temperature.

14 Maintenance and use

- Regular sweeping and blowing to keep the pores open.
- Pressure washer held at a reasonable distance.
- Avoid turning wheels while stationary, point loads (stands, jockey wheels, jacks) without a spreader plate, and prolonged fuel or oil leaks.

15 Packaging and storage

- Resin: 20 kg kit (A 10.99 kg + B 9.01 kg), ADR-approved packaging, 9-month shelf life between +8 °C and +30 °C, away from moisture and sunlight.
- Catalyst: 0.5 kg bottle.
- Aggregates: 25 kg bags, store dry.

16 Notes

Values from tests and technical experience; they vary with site conditions. A trial is recommended. The installer must check that the system suits the site.

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