

Peran STB Public (3mm)

Application instructions

Preparation/substrate

Surfaces to be coated should be sound and provide adequate strength for the proposed end use with a minimum compressive strength of 25 N/mm². Check the relative humidity of floors at ground level. Substrate humidity can be up to 100% RH, but surface dry.

All residues must be removed to provide a dry, dust free open textured surface. The surface profile and levels should be appropriate for the system to be applied.

Contact us for advice if there are impurities, such as oils etc., in the concrete.
Follow our instructions for connections to grid drains, cesspools, pipes and pipe inlets.

Primer

Prime the substrate using **Hydraseal DPM**

Pour all of Hardener B into the Base A container. Mix using a slow speed drill and helical spinner until a homogenous mixture is obtained. Do not entrain too much air.
Immediately after mixing, pour out all of the resulting mixture onto the floor and apply using a double-lipped rubber squeegee and/or roller. Ensure that the primer permeates any surface irregularities.

Scatter **Dorsilit Natural Quartz 1.0 – 1.8 mm** (size 5) into the primer, whilst wet.
Allow the primer to harden until the surface can be walked on, approx. 15 hours at 20°C. At lower temperatures the hardening time is longer.
It is important there are no dry patches. In instances where the substrate is highly absorbent, two coats of primer may be required in order to avoid dry patches.

Consumption, primer: approx. 0.3 kg/m² per coat.

Consumption, Natural quartz: approx. 0.5 kg/m².

Application

The system is based on mixing a so-called "slurry".
Firstly mix the **Peran STC LE**, A + B components together using a slow speed drill and helical mixing blade. Scrape sides and base of the mixing vessel during this process. Ensure the liquids are homogeneous before moving to next stage.

The pre-mixed Peran STC LE (A+B) is then mixed together with Peran Compact White in the weight ratio of 1:1 (i.e. 1kg of Peran STC LE + 1kg of Peran Compact White).

Lay the slurry (using the Natural Quartz in the primer as a thickness guide) in an even layer by means of a broad steel spatula or trowel (flat edge). Allow to stand for 10-15 minutes and then cover/blind to full saturation with Coloured Quartz.

NOTE! It is important not to over scatter the slurry layer; scatter just enough to cover the wet resin areas. If an excess of quartz is applied to the slurry, the quartz will not compact and wet-up correctly during power floating. A heavy texture/profile will result after curing and the sealer demand will increase.

To aid application, it is possible to add some of the scatter quartz to the slurry mix. This has the benefit of reducing the amount of scatter applied to the slurry and hence the waiting time as the quartz sinks into the slurry and then demands a further scatter.

Consumption: Slurry approx. 2.0 kg/m²
(0.5 to 1.0 kg/m² coloured quartz can be added to the slurry mix)

Coloured Quartz Scatter approx. 3.5 kg/m²
(reduce by the quantity added to the slurry)

The amount of quartz that can be added to the slurry depends upon the application/material temperatures and the fluidity required by the applicator.

Mixing machine: Slow speed drill + helical steel paddle.

NOTE! Do not mix more slurry than can be applied in 20 minutes. Check the different batch numbers on the Coloured Quartz to make sure that the colour is the same.

Let the system stand for 10-15 minutes to allow the resin to wet up and the quartz to settle. The surface should then be smoothed with a light weight power float. Do not over trowel. Allow the system to harden until the surface can be walked on, approx. 15 hours at 20°C. At lower temperatures the hardening time is longer.

Power Float:

Check that the blades are not damaged and are clean. Always make sure you have extra blades in reserve. Soft smoothing blades are used to minimise smoothing swirls. New blades can be worn in by running the float on a smooth hard surface.

NOTE! When power floating, leave an un-trowelled edge of Coloured Quartz (approx. 15cm) in order to marry in" the next broadcast of scattered quartz.

Skirting/Coves

For best results the floor and coves should be applied in one operation. This will avoid having a seam visible between the floor and cove. Use a chalk line to keep the top edge of the cove straight, then apply masking tape along the same edge, prime the cove using **Peran TCW LE** (remove the masking tape after the cove detail is complete - before cure is complete).

Mix 1 part by weight of Peran TCW LE, and then add 6 parts by weight of the Coloured Quartz. Do not mix more than 3 kg of the compound at once.

Apply the skirting compound into the wet primer with a trowel/spatula. Carefully smooth. Use a little soapy water on the tool for best results. Draw the tape and brush to the top edge to obtain a smooth transition.

NOTE! Pay special attention to the above. A well executed skirting emphasises good workmanship.

Topcoat

Before applying the topcoat, scrape ("de-nib") the skirting, cove and floor to remove all the loose particles and high points. Carefully vacuum clean. The compound should be allowed to cure for at least 15 hours (max 24 hours) before applying the topcoat.

Apply the Peran STC LE topcoat in a flood layer with a broad steel spatula or trowel (flat edged). Allow the Peran STC LE topcoat to penetrate and follow up with a stiff rubber rake to obtain a smooth (lightly textured) surface structure.

Use Peran TCW LE to seal vertical (and non horizontal) surfaces, such as skirting, coves and around grid drains.

Do not mix overlarge quantities of topcoat at any one time. If the topcoats start to gel/harden during the application, this will result in an uneven surface finish. Do not mix more than can be consumed within 15 minutes.

Allow the sealer to harden until the surface can be walked on, approx. 15 hours at 20°C. At lower temperatures the hardening time is longer.

Sealer

A matt sealer is highly recommended to give the best aesthetics for the system; otherwise the gloss finish exhibited from the STC may highlight every undulation or trowel mark.

For a matt finish, apply **Flowseal PU Matt (Ultra)** in a very thin layer to finish the system.

Flowseal PU Matt (Ultra) is supplied in complete units, A+B.
Thoroughly shake the Base and Hardener components prior to mixing.

Decant all of the Base A component into a suitable mixing vessel, add all of Hardener B and mix with a slow speed drill and helical spinner, taking care to minimise air entrainment.

If improved slip resistance is required, PU Anti-Slip Additive can be added to the Base A in a suitable (for the first coat only) mixing vessel and mixed with a slow speed drill and helical spinner, taking care to minimise air entrainment. Once fully dispersed add all of Hardener B and continue mixing until well blended.

Note: The mixture should be stirred from time to time to remain homogenized.
Do not add PU Anti-Slip Additive to the second coat of sealer.

Use a paint tray, a short pile high quality microfiber roller (avoid using rollers containing loose fibres i.e. must be fluff free e.g. Aquatop 10 mm roller). Distribute evenly in consistent layer thickness, not exceeding 100µ, to ensure a consistent bubble-free finish and finish within five minutes of applying to the floor. Do not pour product directly on to substrate and avoid ponding.

Apply only enough product to enable an open wet edge of 10 minutes to be maintained.

Note: Mixed material should be used within 4 hours.

After allowing the surface to dry (at least 2 hours, but within the same day) the second coat can be applied.

Consumption, Flowseal PU Matt (Ultra), approx: 0.1 kg/m², applied in two coats.

Consumption, Flowseal PU Matt (Ultra) with Anti-Slip

1st coat Flowseal PU Matt (Ultra) + PU Anti-Slip Additive, approx 0.05 kg/m² mixture

2nd coat Flowseal PU Matt (Ultra) approx: 0.05 kg/m²

3rd coat Flowseal PU Matt (Ultra) approx: 0.05 kg/m² (optional for reduced texture)

Note: Too many layers of Flowseal PU Matt (Ultra) will lead to a cloudy finish.

Note: If working in an area with a large window or light source, start at that point and work away, using the light cast from behind to aid even and complete application.

For best results apply two coats; the first should be applied in one direction e.g. north to south and the second coat at 90° to the first e.g. east to west.

Drying/Curing Requirements:

The recommended substrate and air temperature is 15 - 25°C, but no less than 10°C. The temperature of the substrate should exceed the “dew point” by 3°C during application and hardening. Temperatures should not fall below 10°C in the 24hrs after application. Ambient humidity should be between 30 and 75% RH during application and cure. High humidity in the early stages of cure can result in extended cure times. Do not cover or wash within the first 7 days of curing.

Note: Breathable floor protection may be used after 12 - 14 hours at 20°C.

Curing time (at 50% RH)	20°C	Overcoat times	20°C
Light foot traffic	12 - 14 hours	Minimum	2 hours
Full traffic	2 - 3 days	Maximum	8 hours
Full chemical cure	7 days		

In order to ensure the fastest possible water release from the applied product it is essential to provide a well-ventilated environment which reduces ambient humidity and avoids condensation problems related to dew point temperature. Additionally, it is essential to avoid the spilling of liquids onto the applied product during the initial cure period.

Please consult individual Product Datasheets for further information.

Note that:

Concrete is a very porous material; as it warms during the day it “outgases” (expels air). A coating applied while the concrete is out gassing is likely to develop bubbles and pinholes.

To avoid this, the material should be applied when the temperature of the concrete substrate is static or falling (usually this is from late afternoon into the night).

Stop applying the material well before dawn, so it has time to set up (firm to the touch) before out gassing begins. This may be anywhere from 1 to 6 hours, depending upon the weather conditions and the product applied. In addition, it is a good idea to shade the work area from direct sunlight.

An additional priming process may be required in situations where out gassing could be a problem. Consult Flowcrete for priming recommendations.

Flowcrete products are often multiple component system. Poor mixing, or incorrect mixing procedures, can result in irregular and incomplete hardening, which in turn can result in inferior performance of the finished system.

Check the batch numbers and size of the quartz. Remove any sacks that do not contain the correct colour or size.

The temperature should be over 15°C to achieve the best results during application. The temperature of the substrate should be at least 10°C, although a temperature of 15-25°C is preferred. Conditions of high humidity combined with sudden falls in temperature should be avoided during the cure period as this can lead to condensation effects such as carbamation and blooming – whilst not deleterious over the performance of this system, this can cause an impaired surface finish. The temperature of the substrate should exceed the “dew point” by more than 3°C during application and hardening.

The products should be stored in such a way that the temperature of product is the same as the room temperature where they are to be applied i.e. between 15-25°C (this also applies to the quartz). This improves the mixing, flow, penetration and hardening of the product.

There are often several types of products at a workplace. Sort the products separately to avoid mistakes.

Consumption of materials

Primer

Hydraseal DPM	0.3 kg/m ²
Dorsilit Natural Quartz 1.0 - 1.8 mm (size 5)	approx. 0.5 kg/m ²

Slurry

Bonding agent		(quartz added to slurry)
Peran STC LE	1.0 kg/m ²	1.0 kg/m ²
Peran STC Filler	1.0 kg/m ²	1.0 kg/m ²
Coloured Quartz 7 or 5/7		approx. 0.5 - 1.0 kg/m ²

Scatter

Coloured Quartz size 7/8	approx. 3.5 kg/m ²	approx. 3.0 - 2.5 kg/m ²
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Topcoat

Peran STC LE	approx. 0.2 kg/m ²	approx. 0.2 kg/m ²
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Sealer

Flowseal PU Matt (Ultra)	approx. 0.1 kg/m ² (applied in 1 or 2 coats)	approx. 0.1 kg/m ² (applied in 1 or 2 coats).
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Skirting/coves

Primer

Peran TCW LE	approx. 0.02 kg/running metre
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Skirting compound

approx. 1.3 kg/running metre with height of 10cm

Topcoat

Peran TCW LE	approx. 0.03 kg/running metre
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Ratio of components

		Weight	Volume
Hydraseal DPM	A:B	2,4:1	2:1
Peran STC LE	A:B	2,2:1	2:1
Peran TCW LE	A:B	2,4:1	2,2:1
Flowseal PU Matt (Ultra)	A:B	10:1	10:1

Cleaning of tools

Clean immediately after use in solvent, e.g. Flowsolve Cleaner or Acetone.

Any suggested practices or installation specifications for the composite floor or wall system (as opposed to individual product performance specifications) included in this communication (or any other) from Flowcrete UK Ltd constitute potential options only and do not constitute nor replace professional advice in such regard. Flowcrete UK Ltd recommends any customer seek independent advice from a qualified consultant prior to reaching any decision on design, installation or otherwise.

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