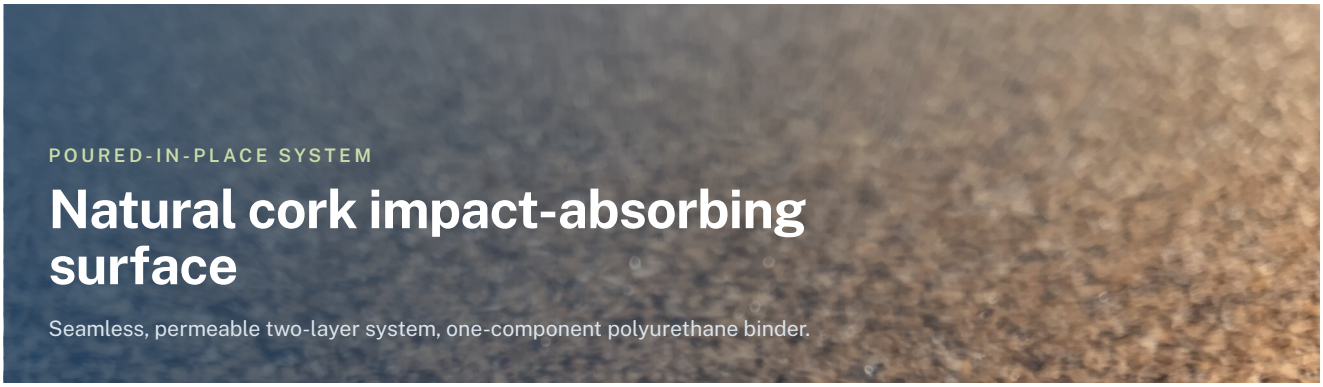


POURED-IN-PLACE SYSTEM

Natural cork impact-absorbing surface

Seamless, permeable two-layer system, one-component polyurethane binder.

Fig. 1 — Finished surface, 1/3 mm cork granules, top view.

01 — SYSTEM DESCRIPTION

Seamless, permeable two-layer poured-in-place surface. Impact-absorbing base layer in 3/7 mm cork granules and top layer in 1/3 mm granules, bound with one-component polyurethane resin. Natural cork colour, no pigment.

02 — BUILD-UP AND THICKNESSES

Layer	Grading	Thickness	Function
Impact-absorbing base layer	3/7 mm	varies with fall height	impact absorption
Top layer	1/3 mm	15 mm	wear and surface

Note — the cork top layer is laid at 15 mm, not 10 mm as for an EPDM top layer.



Fig. 2 — System cross-section. Top: the closed, even top layer in fine 1/3 mm granules; below: the open-structured impact-absorbing base layer in 3/7 mm granules.

03 — FALL HEIGHTS

Total system thickness	Free fall height
30 mm — top layer only	1.10 m
60 mm (45 + 15)	**2.00 m**
80 mm (65 + 15)	2.20 m
above 80 mm	subject to specific testing

Source — values from laboratory tests, EN 1177 method 1, on a concrete substrate, rounded down to the nearest 10 cm; performance on unbound aggregate or asphalt is higher.

Performance gains slow sharply above 60 mm: the system offers its best thickness-to-performance ratio between 1.10 and 2.00 m of fall height.

The final thickness is for the installer to decide, according to site conditions.

TERRALUDIS RULE OF THUMB

60 mm

protect a fall height of 2.00 m.

System of 45 mm 3/7 mm base layer + 15 mm 1/3 mm top layer.

04 — BINDER

One-component polyurethane binder, mixed on site with the cork granules.

05 — INSTALLATION

- Substrate: compacted crushed aggregate, 100 mm minimum, or cured asphalt, or concrete. 1% fall. Residual substrate moisture < 4%.
- Polyurethane bonding primer.
- Mix in a forced-action mixer. As cork is absorbent, the open time of the mix is shorter than with rubber granules.
- Lay with a screed bar and trowel, with even, consistent compaction. Compaction has a direct effect on impact-absorbing performance.

PLANNING NOTE

Time before use: 48 h minimum.

A key factor in site phasing, much longer than for rubber-granule systems.



Fig. 3 — Cross-section of the 3/7 mm impact-absorbing base layer laid on asphalt, before the top layer.

06 — PERFORMANCE AND DURABILITY

Permeability — permeable, free-draining surface: rainwater soaks through.

Appearance — natural material: colour varies from batch to batch and under UV the surface develops a greyish patina. This is a characteristic of cork; it does not affect system performance.

07 — ENVIRONMENT AND HEALTH

- Renewable raw material, harvested by hand stripping with no felling, every nine years; the tree is kept and regrows its bark.
- No heavy metals, no PAHs, no formaldehyde, no added endocrine disruptors.
- No tyre granules: the granules are natural cork, not a synthetic polymer.
- Fully permeable, helping to reduce sealed ground surfaces.



Fig. 4 — Young cork oak seedlings in a nursery.