

Talrakflortop® SL E2000

Self leveling 2mm thick epoxy resin based floor topping



The Construction Alchemists

Description

Talrakflortop® SL E2000 is an epoxy based self leveling floor topping that can be applied at 2mm thickness. It consists of pigmented epoxy resin that binds carefully selected graded aggregates. It is supplied as a four part system, pre-weighed and prepacked for on-site mixing. When laid, it provides a smooth, light-reflective surface.

Features & Benefits

- Chemically resistant - good resistance to a wide range of chemicals.
- Hygienic - provides a dense, impervious, seamless floor surface which is easily cleanable.
- Aesthetic - available in a wide range of colours with light reflecting pleasing surface finish.
- Self-leveling - faster application.

Primary Application

Talrakflortop® SL E2000 is designed for use in wide range of industries where durable floor with minimum maintenance is desired. It provides an impervious, chemically resistant seamless floor surface which is hygienic and easy to clean. It is available in selected colours. The Typical industries where Talrakflortop® SL E2000 is useful are :

- Pharmaceutical industries
- Chemical laboratories
- Food processing units
- Control rooms
- Clean rooms
- OTs in hospitals

Specification Clauses

The identified floor areas shall be treated with Talrakflortop® SL E2000, a 2mm thick self-levelling epoxy resin floor topping. The topping shall achieve a compressive strength of 50 MPa and a flexural strength of 34MPa at 7 days when tested to BS6319. At 20°C, it shall be capable of accepting normal foot traffic after 24 hours and light vehicular traffic after 72 hours.

Design criteria

Talrakflortop® SL E2000 is designed for application at a nominal thickness of 2mm. Substrates should be dry and should not be subjected to raising dampness. The surface shall not have free moisture. If necessary, suitable damp-proof membranes should be installed during construction to prevent this. Substrates should not have a relative humidity greater than 75% at the time of installation.

Technical Properties

The following properties of mixed material at 27°C represent average values achieved in the laboratory. The practical values, on site may slightly vary.

Specific Gravity	1.6 - 1.7
Potlife Talrakflortop® SL E2000 Talrakepoprime LV	45 - 60 mins. 90 - 120 mins.
Compressive strength (BS 6319)	50 MPa @7 days
Flexural strength (BS 6319)	32 - 34 MPa @7 days
Abrasion resistance	0.1mg/ cycle-loss of weight (ASTM D 4060) (with CS 17 wheel of 1000g weight)
Shore D Hardness as per (ASTM D 2240)	80
Normal foot traffic Light vehicular traffic	After 24 hrs After 72 hrs

Chemical Properties

Talrakflortop® SL E2000 has excellent resistance at ambient temperatures to a wide range of industrial chemicals when fully cured . Specific data is available on request. The treated floor may offer chemical resistance if the spilled chemicals are cleaned quickly, with out allowing the material dry up on the surface

Application Instructions

Surface Preparation

The substrate has to be sound and solid as well as free of bond inhibiting agents such as grease and oil. Remove all bond breaking substances such as laitance, loose particles, dust, etc. The substrate can be prepared according to need by shot-blasting, grinding, or brushing. Concrete and screed substrates are primed with Talrakepoprime LV as per guidelines. The pull-off strength of substrates which are to be trafficked must have a min. tensile strength of 1.5MPa. The concrete substrate shall not have a moisture content exceeding 5% and shall be free from rising dampness. If the floor is likely to be subjected to the moisture saturation moisture barrier coat is to be applied. Talrak technical team shall be contacted for further details

New Concrete Floors

New concrete, or cementitious substrates, should be at least 28 days old and have a moisture content not exceeding 5%. Laitance deposits on new concrete are best removed by light grit blasting, mechanical scabbling or grinding.

Old Concrete Floors

Existing concrete floors which require refurbishment must be prepared to ensure a strong mechanical and adhesive bond between Talrakflortop® SL E2000 system and the existing floor. Mechanical cleaning methods are strongly recommended particularly where heavy contamination by oil and grease has occurred or existing coatings are present. To ensure adhesion, all contamination should be removed.

Priming

All surfaces to be treated with Talrakflortop SL E2000 should be primed with Talrakepoprime LV, a solvent based epoxy resin primer designed as a floor sealer and a bond enhancer to the concrete substrates. Add the entire contents of the hardener tin to the base tin and mix the two primer components thoroughly for at least 2 minutes - under no circumstances should part mixing be considered. Once mixed, the primer should be applied immediately to the prepared substrate using stiff brushes and/or rollers. The primer should be well 'scrubbed' into the substrate to ensure full coverage, but care should be taken to avoid over application or 'puddling'. Allow the primer to dry as for the required time before proceeding to the next stage. Do not proceed whilst the primer is 'tacky' as this will lead to unsightly marks on the finished surface.

Porous substrates may require a second primer coat - when the first coat is directly absorbed into the substrate - but minimum over-coating times must still be observed (see below). The minimum over-coating times will vary slightly according to the porosity of the substrate. However, they should be in accordance with the following ambient application temperatures.

20°C: 8-12 hours

30°C: 6-8 hours

40°C: 4-6 hours

Mixing

Talrakflortop® SL E2000 flooring is supplied in four pre-weighed packs (base, hardener, fillers and colour pack) which are ready for immediate on-site mixing. Part mixing of these components shall not be permitted as it will adversely affect both performance and appearance of the finished floor.

Mixing should be carried out using either a forced action mixer; or a heavy duty, slow-speed drill fitted with mixing paddle. All such equipment should be of a type and capacity approved by Talrak. The components should be mixed in a suitably sized mixing vessel.

The colour pack should be added to the base container and mixed for 15-30 seconds, until homogeneous. Then add the hardener and mix for further 30 seconds, until an even colour and texture is obtained.

Thereafter, the contents of the graded aggregate pack should be slowly added and mixing carried out for a further 3 minutes until a completely homogenous material is obtained.

Application

The applicator should ensure that there are sufficient supplies of plant, labour and materials to make the mixing and subsequent application process a continuous one for any given, independent floor area. Once mixed, the material must be used within its specified pot life as mentioned under "Technical Properties" section. Use an electrical paddle mixer and mix intensively for 3 minutes until a free-flow, lump free consistency is reached. Distribute the material in the desired layer thickness directly after mixing. Mix and distribute the material in a constant work flow to avoid visible work edges. The material is self leveling when working "fresh in fresh". While working larger areas use serrated trowel to distribute the material. Rolling the surface with a spiked roller immediately after distribution creates a very smooth surface through better de-airing. Do not delay successive pours by more than 5 minutes to avoid visible work edges. Further light rolling may be required to remove surface imperfections, or for subsequent release of trapped air, but should be prior to the setting of the product.

Floor Joints: All existing expansion or movement joints should be followed through the new floor surface. Joint sealant & joint geometry should be compatible with the floor type used, intended exposure conditions and likely movement characteristics of the substrate - consult Talrak for more details.

Cleaning

Talrakepoprime LV, and Talrakflortop® SL E2000 should be removed from tools and equipment with Talrasol GP immediately after use. Hardened material can only be removed mechanically.

Maintenance

The service life of a floor can be considerably extended by good housekeeping. Regular cleaning may be carried out using a rotary scrubbing machine with a water miscible cleaning agent at temperatures up to 50°C.

Limitations

- Talrakflortop® SL E2000 should not be applied on to surfaces known to, or likely to suffer from, rising dampness, potential osmosis problems or have a relative humidity greater than 75% as measured in accordance with BS 8203 Appendix A, or by protimeter.
- In areas where significant thermal shock is likely to occur, please consult Talrak.
- Talrakflortop® SL E2000 should not be applied to asphalt, weak or friable concrete, unmodified sand/cement screeds, PVC tiles or sheet or substrates known to move substantially e.g. steel walkways. For information on other substrates, consult Talrak
- Talrakflortop® SL E2000 should not be installed at temperatures below 10°C or above 45°C. If in doubt, or application outside these temperature limits, please consult Talrak.
- In common with all epoxy materials some light shade changes may be experienced over the long term when placed in adverse exposure conditions. Any such change in shade is not regarded as being detrimental to performance.

Estimating Packaging

Talrakflortop® SL E2000	15 litre pack (incl. colour pack)
Talrakepoprime LV	1.11 and 4.44 kg combo packs
Talrasol GP	5 and 20 litre can

Coverage

Talrakflortop® SL E2000	7.5 m ² / 15ltr pack @ 2 mm thickness (for ideal flooring)
Talrakepoprime LV	5 - 6 m ² / kg

Note: The coverage figures given are theoretical. Due to wastage factors and the variety and nature of possible substrates, practical coverage figures will be reduced. Typically, an additional 10% should be allowed for surface irregularities and wastage although this will vary with site conditions.

Storage

All the above mentioned products have a shelf life of 12 months if kept in dry store in original, unopened containers. If stored at high temperature and/or high humidity conditions the shelf life may be reduced.

Precautions Health & Safety instructions

Talrakflortop® SL E2000, Talrakepoprime LV and Talrasol GP should not come in contact with the skin and eyes, or be swallowed. Ensure adequate ventilation and avoid inhalation of vapours. Some people are sensitive to resins, hardeners and solvents. Wear suitable protective clothing, gloves and eye protection. In case of contact with skin, rinse with plenty of clean water, then cleans with soap and water. Do not use solvent. In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice. If swallowed seek medical attention immediately - do not induce vomiting.

Fire

Talrakepoprime LV and Talrasol GP are flammable. Keep away from sources of ignition. No smoking. In the event of fire extinguish with CO₂ or foam. Do not use a water jet. Talrakflortop® SL E2000 is non-flammable.

Flash points

Talrakepoprime LV : 39°C
Talrasol GP : 33°C

Important note :

Talrak products are guaranteed against defective materials and manufacture and are sold subject to its standard terms and conditions of sale, copies of which may be obtained on request. Whilst Talrak endeavours to ensure that any advice, recommendation specification or information it may give is accurate and correct, it cannot, because it has no direct or continuous control over where or how its products are applied, accept any liability either directly or indirectly arising from the use of its products whether or not in accordance with any advice, specification, recommendation or information given by it.



Talrak Construction Chemicals Pvt. Ltd.
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