Vetotop ES659

Epoxy-based floor screed (Heavy duty)
From 3 to 35 mm in thickness

Uses

- In industrial engineering plants and steelwork.
- In vehicle factories, car parks, and areas receiving trailer traffic.
- For heavy-duty applications such as turbine rooms, armories, and hangers.

Product Description

Vetotop ES659 is a trowel-applied floor screed composed of a three-part solvent-free combination of epoxy resin, modified amine hardener, and filled with specially graded & chemically inert aggregates. The heavy duty product performs exceptionally well in demanding applications where abrasion and impact resistance are crucial.

Advantages

- Fast & easy application.
- High abrasion and chemical resistance.
- Low maintenance costs.
- Hygienic, impervious, and easily cleanable.
- Available in 8 standard colors (with the possibility of custom RAL colors).
- High bonding properties (stronger than concrete cohesive strength).

Standards Compliance

- ASTM C722

Design Criteria

Vetotop ES659 is designed to be a hard-wearing trowel-applied epoxy screed on cementitious or metal substrates at thicknesses between 3 to 35 mm. The applied product will be resistant to water as well as a wide range of chemicals.

Technical Data

Vetotop ES659	Typical Values
Solid Content (by Volume %)	100
Pot Life @ 20°C/68°F (Minutes)	45
Pot Life @ 40°C/104°F (Minutes)	15
Mixed Density @ 20°C (kg/L)	2.02
Application Maximum Relative Humidity (%)	75
Compressive Strength - ASTM C579 (N/mm^2)	60
Flexural Strength - ASTM C580 (N/mm^2)	34
Tensile Strength - ASTM C307) (N/mm^2)	23
Bond Strength to Concrete - ASTM D4541 (N/mm^2)	> 2
Water Absorption - ASTM C413 (maximum)	0.004
Porosity with No Sealer NACE Sand (TM-01-74)	0
Skid Resistance - ASTM D2394	Pass
Minimum Application Temperature (°C)	12

Usage Instructions

Surface Preparation

The surface should be sound, clean, free from loose material, grease, laitance, dirt-curing compounds, etc.

Laitance and weak surface layers should be removed using mechanical methods such as grinding or blasting to provide a sound, well-profiled surface. Make all the necessary repairs before applying by using an epoxy mortar from the Vetorep ER range. New concrete floors should be at least 28 days old with a moisture content of less than 5% (for earlier applications, test the moisture conditions of the substrate).

Priming

All surfaces receiving Vetotop ES659 should be primed with Vetoprime EP691 (which is designed for maximum absorption and adhesion to concrete substrates). Add the entire content of the hardener tin to the base tin and mix the two primer components thoroughly for at least 2 minutes (Do NOT mix partial quantities).

Once mixed, apply the primer immediately to the prepared substrate using a stiff brush and/or a roller. The primer should be 'scrubbed' well into the substrate to ensure full coverage. Avoid over-application or 'ponding'.

Allow the primer to become tacky before proceeding to the next stage, do not proceed while the primer is 'tacky' as this will lead to unsightly marks in the finished surface. Porous substrates may require a second primer coat (this can occur when the first coat is directly absorbed into the substrate. Observe minimum overcoating times before using this product).

Mixing

Vetotop ES659 is supplied in three pre-weighed packs (base, hardener, and aggregate), ready for immediate on-site use. Avoid mixing partial quantities of these components as it will affect both the performance and appearance of the finished floor.

Mixing should be done using either a forced action mixer, or a heavy-duty mobile mixer fitted with a jiffy-type mixing paddle. All such equipment should be of a type and capacity approved by Saveto. The components should be mixed in a suitably sized mixing container.

Stir the base and hardener components individually, then empty them into the mixing container (make sure to scrape the edges), and mix for 2 minutes. Add the contents of the graded aggregate pack slowly and mix for another 3 minutes until a completely homogeneous mix is obtained.

Application

Begin the application process 30 minutes after applying the primer (at 23°C & while the primer is still tacky). Spread Vetotop ES659 to a uniform thickness on the primed surface using either a screed box or the edge of a steel trowel. The material should be tamped with a steel float to ensure complete compaction.

Finally, the layer should be finished to a closed & even texture using a steel trowel. Screeding rods are useful to maintain a minimum compacted thickness of 3 mm. After mixing, apply the material within the pot life.

Coving

Vetotop ES659 can be used to form a perimeter edge coving up to a height of 50 mm. Skilled applicators can also use it to repair stair treads and fix expansion joint edges.

Sealing

Although Vetotop ES659 is impervious at a thickness of 3 mm in constantly wet operations areas or where a high degree of cleanliness is required, you can seal Vetotop ES659 with Vetotop EC698 (Vetotop ES659 must be at least 3 days old. Rub down high spots such as trowel marks).

Cleaning

Clean all tools and equipment immediately after use with Vetonit Solvent XX300.

Packaging & Coverage

Product	Pack Size	Coverage
Vetotop ES659	48 Kg Kit	23.8 m^2/kit @ 2 mm thickness
Vetoprime EP691	4 & 15 Liters Kit	7 - 10 m^2/ Liter

Stated consumption data are for general guidance. Actual consumption depends on the nature of substrate, method of application, and wastage.

Shelf Life & Storage

The original sealed kit of Vetotop ES659 has a shelf life of 12 months, provided it is stored clear of ground in a dry and shaded place at a temperature below 35°C.

Health & Safety

Vetotop ES659 is non-flammable. Refer to the product material safety data sheet for more information.

Additional Information

Saveto manufactures a wide range of construction chemicals and specialty products for various applications.

For further information on these products and systems kindly check our website or contact your local Saveto representative.

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