



Vetotop ES459

Heavy duty epoxy based floor screed from 3 to 25 mm thickness

Uses

- Industrial engineering plants and steel work.
- Vehicle factories, car parks and areas receiving trailer traffic.
- Repair of damaged concrete floors and edges of expansion joints.
- Heavy duty applications, turbine rooms, armories and hangers.

Product Description

Vetotop ES459 is a trowel applied floor screed composed of three part solvent-free combination of epoxy resin; modified amine hardener filled with specially graded chemically inert aggregates. The product performs in heavy duty demanding applications where abrasion and impact resistance are crucial factors in product choice.

Advantages

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

Standards Compliance

- BS EN476:2009 as class 1 in flame spread.

Design Criteria

Vetotop ES459 is designed to be a hard wearing trowel applied epoxy screed on cementitious or metal substrates at thicknesses between 3 to 25 mm. The applied product will be resistant to water as well as a wide range of chemicals.

Technical Data

Vetotop ES459	Typical Values
Solid Content (%Volume)	100
Kit Size (L)	15
Theoretical Coverage sqm @ 6mm	2.5
Pot Life @ 20°C/68°F (min)	45
Pot Life @ 40°C/104°F (min)	15
Mixed Density @ 20°C (kg/L)	2.02
Application Maximum Relative Humidity (%)	75
Compressive Strength ASTM C579 (N/mm ²)	85
Bending Strength (N/mm ²)	34
Tensile Strength ASTM C307 (N/mm ²)	23
Bond Strength to Concrete ASTM D4541 (N/mm ²)	>2
Taber Abrasion ASTM D4060 CS17 Wheels (mg loss / 1000 cycles)	20
Water Absorption ASTM D413 (maximum)	0.004
Porosity with no Sealer NACE Sand TM- 01-74	0
Hardness Shore D	85
Skid Resistance ASTM D2394	Pass
Minimum application temperature	12 °C

Usage Instructions

Surface Preparation

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

Laitance and weak surface layer shall be removed using mechanical methods such as grinding or blasting in order to provide a sound well profiled surface. All necessary repairs should be made prior to application by using epoxy mortar from Vetorep ER range. New concrete floors shall be at least 28 days old with moisture content of less than 5% (shall earlier application be required testing of substrate for moisture conditions shall be made).

Priming

All surfaces receiving Vetotop ES459 should be primed with Vetoprime EP491 which is designed for maximum absorption and adhesion to 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 - only mix full packs. 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 'ponding'. Allow the primer to become tacky before proceeding to the next stage. 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.

Mixing

Vetotop ES459 is supplied in three pre-weighed packs (base, hardener and aggregate) which are ready for immediate on-site use. Part mixing of these components is not acceptable and will affect both performance and appearance of the finished floor. Mixing should be carried out using either a forced action mixer; or a heavy duty mobile mixer fitted with a suitable 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 vessel. Stir the base and hardener components individually then empty them into the mixing vessel scrapping the edges and mix for 2 minutes. The contents of the graded aggregate pack should be slowly added and mixing carried out for a further 3 minutes until a completely homogeneous material is obtained.

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Application

Application starts 30min after primer application (at 23C°) while the primer is still tacky. Vetotop ES459 should be spread to 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 wooden float to ensure complete compaction and finally finished to a closed even texture using a steel trowel. Screeding rods are useful to maintain a minimum compacted thickness of 3 mm. The material must be applied within the pot life after mixing.

Coving

Vetotop ES459 can be used to form perimeter edge coving up to a height of 50mm. Skilled applicators can also use it to repair stair treads and fix expansion joint edges.

Sealing

Although Vetotop ES459 is impervious at 3 mm thick in constantly wet operations areas or where a high degree of cleanliness is required, the Vetotop ES459 may be sealed with Vetotop EC498.

Vetotop ES459 must be at least 3 days old and high spots such as trowel marks rubbed down.

Cleaning

All tools and equipment should be cleaned immediately after use with Vetonit Solvent XX600.

Packaging & Coverage

Product	Pack Size	Theoretical Yield
Vetotop ES459	15 Liters Kit	5 m ² /kit @ 3mm thickness
Vetoprime EP491	4 Liter Kits	7-10 m ² / Liter

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

Shelf Life & Storage

Original sealed bag of Vetotop ES459 has a shelf life of 12 months provided it is stored clear of ground in a dry and shaded place below 35°C.

Health & Safety

Vetotop ES459 is non flammable. Refer to product material safety data sheet for information.