Optima COATINGS

DATA SHEET

FLOORING

Duratop 480 ES

Optima Coatings Duratop 480 ES is a solvent free epoxy mortar flooring system. It is a three-component solvent free epoxy screed system comprising of a pigmented resin and clear hardener plus pre-packed blended aggregate.

Colours: Cream; Stone; Light, Medium and Dark Grey; Terracotta; Red Oxide; Dark Green and Drakensburg Green.

PRODUCT USES

- To be applied in industrial environments subject to chemical attack and mechanical wear.
- Offers a decorative mortar for a seamless flooring surface.
- Used in areas that are subject to heavy chemical exposure.
- Provides a slip resistant finish and a quick return to service after application.
- NB: Epoxy flooring must not be used as a screed-out-of-doors.
- To be applied at schools, factories, laboratories, food processing areas, supermarkets and garages.

ADVANTAGES

- Seamless and hygienic finish when sealed, no crevices where dirt and bacteria can gather
- Excellent chemical resistance to sugars and acids
- Clean and sterile, low maintenance requirement
- Non-slip finish
- High abrasion resistance
- Solvent-free; low odor
- Far longer life than unprotected concrete floor
- Excellent resistance to damaging liquids.

COVERAGE

- Optima Coatings Duratop 480 ES should be applied at 2kg/m²/mm to achieve the desired screed thickness
- Recommended DFT per application 5 to 10 mm
- Theoretical coverage for a 30 kg kit at DFT of 5mm is 3m².

SURFACE PREPARATION

- The substrate must be dry before application. For concrete, moisture content, tests must be conducted prior to application of the priming system. Maximum moisture content should be between 4-5% using various reliable moisture readers or at very least a practical overnight “plastic sheet test” is also advisable (approx. 1m² masked down on surface).
- Concrete substrate must have a minimum tensile strength of 1.5N/mm².
- Concrete shall be free of all laitance, dust free and clean and preferably should be lightly vacuum blast cleaned or grinded leaving a uniform rough texture.
- All surface defects and cracks may be patched with Optima Coatings’ Durafix range of repair products.
- All floors need to be primed using Optima Coatings’ Duratop DPM Primer prior to the application of Optima Coatings Duratop 480 ES.
- The Duratop 480 ES is trowelled directly into this wet coat within 30 minutes of priming. Should the application of the screed be delayed, the tack coat should be blinded with Optima Coatings coarse silica sand while still tacky and allowed to cure. All excess and unbonded aggregate must be vacuumed away. This will provide a mechanical key suitable for bonding. Apply Duratop 480 ES within 48 hours.

APPLICATION

- The pigmented resin must be stirred prior to being mixed with the hardener.
- The pigmented resin and clear hardener is then mixed thoroughly together until homogenous.
- In order to avoid colour variation in large expanses, one must ensure that the same batch product component is used and is carefully and accurately dispensed (factory colour batching available on request).
- A slow speed mixer must be used. Ensure that the mixing vanes are below the surface of the mix (liquid components) to minimize air entrapment. The stirrer mixing vane configuration should be such as not to introduce unwanted aeration. The blended liquids are then thoroughly mixed with the "special" graded aggregate using a rotating pan type mortar mixer. Add aggregate slowly whilst continuously mixing.
- Prevailing weather conditions must be taken into account otherwise surface defects can occur. Use Optima Coatings Durafix range of repair products to fill in any holes, cracks and crevices using a trowel.
- The material is then spread with a gauge rake, trowel or screed box, to the desired thickness.
- Finally the material is evenly compressed using a plastic finishing trowel, finish moving the trowel from left to right.
- The finished surface should be relatively smooth, free of trowel marks and without open areas. Optima Coatings Duratop 480 ES can be used for making turn-ups or coving on walls, columns and other surfaces to a height of 150 mm. Careful application should ensure that the trowelled floor is non-porous and will not require an additional sealer coat. However, if severe chemical spillage is encountered and doubt exists regarding the non porosity of the flooring a sealer coat should be applied over the cured floor. Duratop 480 ES should then be sealed with
- Duratop PUD clear polyurethane sealer coat. It must be appreciated that sealing of Duratop 480 ES compromises its natural non-slip finish, but abrasive fillers may be incorporated into these sealer coats to restore and in some cases improve non-slip properties. They are applied at a rate of about 15-30 g/m².

CLEANING

- Clean tools and equipment using MEK or epoxy thinners.

TECHNICAL DATA

Pack Size	Prepackaged kits with a total weight of 30kg for all three components
Work Life	30 min – 45 min (after spreading)
Volume Solids	100%
Curing time @ 25°C	Touch: 6hrs Light foot traffic: 24hrs Full cure: 7 days
Over-coating time @25°C	Minimum: 12 hrs Maximum: 36 hrs
Application temperature range	>15°C & <35 °C

Do not apply coating if humidity is in excess of 85% @ 21°C or 75% @ 10°C.
Do not apply coating if the substrate temperature is at least 3°C (5°C is better) above dew point.

Maximum service temperature	60°C
Shrinkage after cure	Negligible
Weather resistance	Chalks on external exposure
Chemical resistance	Good resistance to water, oil, fats, greases, diesel, dilute mineral acids and alkalis.
Dilution	Do not dilute
Flash point	>100°C
Cleaner	MEK Thinners
Shelf life	2 years from date at manufacture if in sealed containers
Storage conditions	Cool dry place below 25ºC

Properties listed are for guidance and are not a guarantee of performance.

Technical details above are provided in good faith. We are an ISO 9001: 2008 registered company and our products are manufactured to the highest standards using raw materials of superior quality. Consequently we believe in the quality of our products and will willingly replace any product in the unlikely event of a quality related performance failure. Whilst we are confident in guaranteeing the quality of our products, we cannot however accept any liability for performance failure due to the incorrect application of our products. Correct application is critical to the successful performance of our products and as this process falls outside of our control we are unable to cover the application under our product performance warranty. Where there are doubts, it is recommended that the user conduct their own suitability tests before use. To retain sheen and colour consistency of your paint, always make sure that the batch numbers are the same on all paint containers that you purchase.

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