Intercrete® 4852

International®

Polymer Modified Cementitious Flooring

FORMERLY FLEXCRETE CEMPROTEC E-FLOOR HB

PRODUCT DESCRIPTION

A two component, water-based (VOC-free), epoxy and polymer modified cementitious coating for the protection of concrete floors. It exhibits a high degree of flow for easy application by pouring or pumping techniques to give a smooth surface finish. It cures to form a hardwearing, durable coating, offering low permeability to water and providing very high chemical and abrasion resistance to ensure long term protection.

INTENDED USES

Specifically designed for the protection of concrete floors and decks subject to trafficking in demanding internal and external environments. Intercrete 4852 can be reinforced with Intercrete 4872 tape to accommodate movement over construction joints.

Intercrete 4852 offers low permeability to water at 10 bar positive and negative pressure along with excellent resistance to oxygen and chloride ion diffusion.

CE-marked in accordance with BS EN 13813 and BS EN 1504-2. Suitable for surface protection systems principles 2.2, 5.1, 6.1, 8.2 as defined in BS EN 1504-2.

PRACTICAL INFORMATION FOR INTERCRETE 4852

Colour	Grey
Volume Solids	100%
Density	1950kg/m^3 (122lb/ft^3)
Typical Thickness	3 millimetres (120 mils) to 6 millimetres (240 mils) dry thickness
Practical Coverage	On prepared substrates, a 30kg pack will cover approximately 5m^2 at 3mm thickness. Practical coverage will depend upon the surface profile and porosity of the area being coated and appropriate losses must be taken into consideration
Method of Application	Serrated Trowel, Skid Leveller, Float, Pin Leveller
Shelf Life	12 months at 20°C (68°F).
Pack Size	30kg composite packs
Working Pot Life	20°C (68°F) 30 minutes

Drying Time			Overcoating interval with self	
Temperature	**Touch Dry**	**Hard Dry**	*Minimum*	*Maximum*
20°C (68°F)	2 hours	4 hours	24 hours	Not applicable

COMPLIANCE AND CERTIFICATION

When used as part of an approved scheme, this material has the following certification:

- CE-marked in accordance with BS EN 1504-2.
  Suitable for surface protection systems principles 2.2, 5.1, 6.1, 8.2 as defined in BS EN 1504-2.
- CE-marked in accordance with EN 13813 Class CT-C40-F10-AR1.
- Compliant with LU Standard 1-085 ‘Fire Safety Performance of Materials’.

CE 2797

CRA

FM 41091 EMS 597530 OHS 597351 Quality Environmental Health & Safety

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SPECIFICATION CLAUSE

The protective coating to concrete floors shall be a two component thixotropic polymer modified cementitious coating, CE-marked in accordance with BS EN 1504-2, and shall comply with the following performance specification:

- Consistency of material such that a 3-6mm coating can be easily applied in one layer.
- Can be applied to "green" concrete
- Categorised as resistant to severe abrasion in accordance with BS 8204 Part 2.
- Compressive strength at 20ºC (68ºF) of at least 5MPa in 4 hours and 50MPa in 28 days.

SURFACE PREPARATION

Concrete

Concrete should have a minimum strength of 20MPa. All surfaces should be clean and free from laitance, curing compounds, release agents, efflorescence, grease, oil, dirt, organic growth, old coatings and loose or disintegrating concrete. Smooth surfaces should be roughened, using high pressure water jetting or similar techniques. The prepared substrate should be thoroughly soaked with clean water until uniformly saturated without any standing water.

Areas still exhibiting signs of oil, grease, etc., must be treated with a proprietary degreaser. In instances of heavy contamination, it may be necessary to use hot compressed air equipment, flame spalling or steam cleaning techniques. All debris should be removed to leave a thoroughly clean, dust-free, open-textured surface.

Priming

The prepared substrate should be thoroughly soaked with clean water until uniformly saturated without any standing water. This includes Intercrete 4851 or any previous coats of Intercrete 4852. To prevent outgassing, the substrate should be sealed with Intercrete 4850, at a typical coverage rate of 5m²/litre. Allow to become transparent, typically 1-3 hours dependent on climatic conditions, before proceeding.

APPLICATION

Mixing

Intercrete 4852 is supplied in two parts; a liquid component (Part A) and a powder component (Part B). MIX FULL UNITS ONLY. Shake Part A thoroughly and pour into a suitable mixing container, then slowly add Part B and mix for a minimum of 5 minutes until homogeneous, without any lumps. During the 5-minute mixing period, scrape the sides of the mixing container to prevent lumps forming. Mixing should be carried out using a slow-speed drill and paddle, designed to entrap as little air as possible. Once the unit has been mixed it should be used within the working pot life specified.

Skid Leveller

Recommended

Work Stoppages / Clean Up

Clean all equipment immediately after use with clean water.

All surplus materials and empty containers should be disposed of in accordance with appropriate regional regulations/legislation.

PRODUCT CHARACTERISTICS

Joints
All formed joints in the existing floor or deck MUST be continued through into the new coating. Over construction joints and 'live' cracks, Intercrete 4852 should be reinforced with Intercrete 4872, using Intercrete 4840 as the embedment material (see separate technical data sheets for further information).

Placing
Intercrete 4852 should be poured or pumped onto the prepared surface and spread to a minimum thickness of 3mm with a squeegee or pin leveller. Roll the surface with a spiked roller to remove entrapped air and to ensure a dense finish. Care must be taken to ensure a minimum 3mm thickness is achieved. Where required, to enhance the skid and abrasion resistance of the finished Intercrete 4852, immediately broadcast a suitable aggregate into the surface, ensuring that the particles are distributed evenly without disrupting the smooth surface of the coating. Contact Protective Coatings Technical Department for further information. Allow to cure for a minimum of 4 hours before removing any excess aggregate, which may be sieved and re-used. Apply Intercrete 4870 with a roller at 5m²/litre. Finishing must be completed within the working life of the material and no later than 10 minutes after placing. Allow to cure for a minimum of 4 hours before subjecting the application to light foot traffic.

Curing
Normal procedures relating to curing of cementitious products should be strictly adhered to. The surface must be protected from strong sunlight, drying winds and high air movements, to prevent skinning during placing and rapid drying out in the plastic state. On unsanded finishes, the coating must be cured using Intercrete 4870, taking care to avoid overspray onto surfaces yet to be treated.

CE mark applies to products manufactured at Tomlinson Road, Leyland, PR25 2DY England, under reference 2797-CPR-530942.

APPLICATION TIPS

- Keep the wet edge live with a steady supply of mixed material and regular spike rolling.
- Regularly clean and dry spiked rollers to avoid material build-up.
- Use spiked shoes during application to avoid disturbing the coating.
- Regularly check coating thickness during application using the wet film thickness gauge available from AkzoNobel.
- Care should be taken during application to ensure that air is not entrapped into the surface.
- Fresh material can be joined up to existing hardened material using a simple butt joint. Apply tape to the hardened material and apply fresh material up to it. Remove tape whilst wet to leave a neat edge.
- In cold, humid conditions, condensation may form on surfaces treated with Intercrete 4852, resulting in darkening of finish and retardation of set.
- Enhance adhesion of subsequent high build decorative/tiled finishes by broadcasting a suitable fine aggregate into the freshly laid material.
- Cure for a minimum of 72 hours before overcoating or applying tiled finishes.
- Apply Intercrete 4870 curing membrane as an even, fine mist spray. Do not over-apply or allow to pond on the surface or cracking may occur.
- When broadcasting aggregate, use techniques such that the particles are thrown upwards and fall evenly without disturbing the smooth surface of the coating. Use a grit blower on larger areas.
- Cold Weather Working (See separate Guide): ≥3°C (37ºF) on a rising thermometer, ≥5°C (41ºF) on a falling thermometer.
- Hot Weather Working (See separate Guide): Store material in cool conditions to maximise working life. Shade applied material from strong sunlight. Spray-apply a second coat of Intercrete 4870. If possible, avoid extreme temperatures by working at night.

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TECHNICAL DATA / MECHANICAL CHARACTERISTICS

Standard and Property	BS EN 1504-2 Requirement	Result
EN 12190 Compressive Strength	>= 50 MPa (Class II)	28 days: 41MPa
BS4551 Compressive Strength Development @ 20°C		4 hours 5.0MPa 1 day 15MPa 7 days 30.0MPa 28 days 50.0MPa
EN196-1 Flexural Strength		28 Days: >13.4MPa
EN 1542 Adhesive Bond	>= 2.00 MPa	3.36MPa
BS EN ISO 7783-2 Water Vapour Permeability (Equivalent Air Layer Thickness)	Class 1 S_D = 5m	S_D= 0.86m
EN13687-1 Thermal Compatibility	>= 2.00 MPa	3.10MPa
Vinci Test: Water Permeability Coefficient (Equivalent Concrete Thickness)		5.78 x 10^{-15}m/sec 6mm = 963mm of concrete
DIN 1048 Resistance to Water Pressure		10 bar (100m hydrostatic head) positive and negative)
EN13813 Wear Resistance		Exceeds AR1: Highest classification of wear resistance
EN 1062-3 Liquid Water Transmission Rate (Capillary Absorption and Permeability to Liquid water)	Class III (low) w <0.1kg.m^{-2}.$h^{-0.5}$	w = 0.056 kg.m^{-2}.$h^{-0.5}$
EN1770 Coefficient of Thermal Expansion	<= 30 x 10^{-6} K^{-1}	20.5 x $10^{-6}K^{-1}$
EN 13501-1 Reaction to Fire	Euroclass	Euroclass $A2_{FL}$ – s1
ASTM C1202-12 Resistance to Chloride Ion Penetration		2923 Coulomb (control concrete 12915 Coulomb)

Note: The properties given above are obtained from laboratory tests: results obtained from on-site testing may vary according to site conditions.

SAFETY PRECAUTIONS

This product is intended for use only by professional applicators in industrial situations in accordance with the advice given on this sheet, the Safety Data Sheet and the container(s), and should not be used without reference to the Safety Data Sheet (SDS).

All work involving the application and use of this product should be performed in compliance with all relevant national, Health, Safety & Environmental standards and regulations.

If in doubt regarding the suitability of use of this product, consult International Protective Coatings for further advice.

Important Note

www.international-pc.com