

Strongcoat HB400

Solvent free high build epoxy floor coating for 200 to 400 microns thickness



DESCRIPTION

Strongcoat HB400 is a high build, hard wearing, solvent free. Produces a seamless, glossy, glass-like surface that is both easy to clean and does not induce bacterial and fungal growth free filled epoxy resin coating, designed to provide a hard, gloss coating to concrete floors. It is supplied as base (resin) and hardener in addition to a colour pack which contains reactive ingredients in preweighed quantities ready for on site mixing and use.

Strongcoat HB400 permits the application of floor coatings of 200 - 400 microns per coat and can be coloured to suit site requirements.

With the addition of Antislip Aggregate (Slip resistant aggregate) between coats, slip resistant floor system can be achieved with a build up thickness between 1.3 to 2 mm.

APPLICATIONS

Strongcoat HB400 is used as protective, decorative, high chemical resistance and hard wearing floor coating system for a wide range of applications including:

- » Aircraft hangars.
- » Car parks.
- » Soft drink and beverage production areas.
- » Dairies production areas.
- » Show rooms.
- » Production, maintenance and assembly areas.
- » Warehouses.
- » General food processing and manufacturing plants.

ADVANTAGES

- » High chemical and mechanical resistance.
- » Available in a wide range of attractive colours.
- » Cost effective.
- » Easy application.
- » High build.
- » Can be applied at 200 - 400 microns thickness per coat.
- » Can be applied in slip resistant finishes.
- » Produces a seamless, glossy, glass-like surface that is both easy to clean and does not induce bacterial and fungal growth.

STANDARDS

Strongcoat HB400 complies with BS 476, Part 7 : 1987, Class 1 Spread of Flame.

TECHNICAL PROPERTIES @ 25°C:

Colour:	Available in different colours
Mixed density:	1.55 ± 0.05 g/cm ³
Solid contents:	100%
Pot life:	50 min
Minimum time between coats:	12 hr @ 25°C 6 hr @ 35°C
Maximum time between coats:	36 hr @ 25°C 18 hr @ 35°C
Full curing time:	7 days @ 25°C 5 days @ 35°C
Compressive strength: BS 6319, Part 2:1983	≥ 50 MPa @ 1 day ≥ 60 MPa @ 3 day ≥ 70 MPa @ 28 day
Flexural strength: BS 6319, Part 3:1990	≥ 30 MPa
Tensile strength: BS 6319, Part 7:1985	15 MPa
Bond strength on C30/35 concrete: ASTM D4541	≥ 3 MPa (concrete failure)
Water absorption: ASTM D570	< 0.1%
Taber abrasion resistance: (1000 g, 1000 cycle) ASTM D4060, weight loss CS17 wheel	70 milligram
Shore D Hardness: ASTM D2240	80 ± 5
VOC: ASTM D2369	≤ 20 g/ltr (comply with LEED)

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METHOD OF USE

SUBSTRATE PREPARATION

The substrate must be clean, dry, even, dense and free from oil, grease, dust and other contaminants. A clean surface will ensure maximum adhesion between the substrate and the coating.

Concrete floors must have a minimum compressive strength of 25 N/mm² and a maximum concrete relative humidity of 80% (max. moisture content of 4%), relative humidity can be measured using a hygrometer. Concrete relative humidity should be less than 80% for concrete 28 days old or more.

SURFACE PREPARATION

Unsound layers and contaminated concrete surfaces must be prepared using mechanical surface removing equipment. Acid etching can be used only in well ventilated areas. Areas deeply contaminated by oil or grease, such areas should be treated by hot compressed air.

PRIMING

Strongcoat HB400 is designed to be used without a primer. However, for highly porous substrates, Strongcoat Primer S is recommended.

MIXING

To avoid inconsistent workability and pot life, make sure that the materials to be used are stored in shaded area and protected from extremes of temperatures, for at least 24 hours prior to application.

Prior to mixing, stir individual components of Resin, Hardener and colour pack. Add the entire contents of the colour pack into the base container and mix with heavy duty drill for 2 minutes till a uniform colour is achieved. Add the entire contents of the hardener container to the mixed colour pack and base and mix thoroughly for at least 3 minutes. Strongcoat HB400 can be supplied with 2 packs, coloured base and hardener.

CHEMICAL RESISTANCE

Occasional spillage after full cure (7 days @ 25°C), ASTM D1308 (Spot - test @ 1 hr)

Organic Acids

Oleic Acid sat.	R
Citric Acid 25%	R
Acetic Acid 5%	RS + SS
Acetic Acid 10%	RS + SS
Yogurt	R
Lactic Acid 10%	RS

Inorganic Bases

Sodium Hydroxide 50%	R
Ammonia Solution 10%	R
Potassium Hydroxide 50%	R

Aqueous Solutions

Sodium Chloride sat	R
Hydrogen Peroxide 2%	R
Tap Water	R
Chlorinated Water	R
Dead Sea Water	R

Solvents

White Spirit	R
Xylene	R
Toluene	R
Acetone	R

Oils & Fuels

Benzyl Alcohol	SS
Brake Fluid	R
Engine Oil	R
Diesel	R
Kerosene	R
Detergents & Soaps	R

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COATING

Use brush or lamb wool roller to apply the mixed Strongcoat HB400 onto the prepared surfaces. A minimum film thickness of 200 microns must be applied per one coat of Strongcoat HB400 at 3.2 m²/kg per coat.

A second coat with a minimum film thickness of 200 microns should be applied at a right angle to the first coat. The second coat may be applied as soon as the first coat has initially dried.

When Strongcoat Primer S is used at a rate of 5 m²/kg, it will give a dry film thickness between 150 - 175 microns with a clear yellow glossy finish.

ANTISLIP APPLICATION

The base coat should be applied at a minimum film thickness of 250 microns and then fully blinded with the chosen Antislip Aggregate. Once the base coat has reached initial cure, all excess aggregates should be removed before a further application of Strongcoat HB400 top coat.

The top coat should be applied at a minimum film thickness of 400 - 750 microns depending on Antislip Aggregate size used.

REMARKS

- » Strongcoat HB400 should not be applied at temperatures below 10°C or where ambient relative humidity exceeds 85%.
- » Strongcoat HB400 should not be applied onto surfaces known to suffer from rising damp.
- » A minimum thickness of 200 microns per coat should be applied to obtain a smooth finish.

CLEANING

Tools and equipment can be cleaned with DCP Solvent when it is wet. Dried Strongcoat HB400 may be removed mechanically.

PACKAGING

Strongcoat HB400 is available in 6 kg packs (3.75 litre) and in 18 kg packs (11.25 litre).

CHEMICAL RESISTANCE

Occasional spillage after full cure (7 days @ 25°C), ASTM D1308 (Spot - test @ 1 hr)

Inorganic Acids

Sulphuric Acid 25%	RS
Sulphuric Acid 40%	RS
Phosphoric Acid 20%	RS + SS
Hydrochloric Acid 10%	RS + SS
Hydrochloric Acid 32%	RD + S
Nitric Acid 10%	R

R: Resistant

RS: Resistant with slight discoloration

RD: Resistant with discoloration

SS: Slight softening

S: Softening

NR: Not Resistant (Destroyed)

COVERAGE

Standard coverage:

Strongcoat Primer S: 5 m²/kg.

Strongcoat HB400 (base coat): 0.31 kg/m².

Strongcoat HB400 (top coat): 0.31 kg/m².

Approximate system thickness: 400 - 600 microns.

Antislip coverage When used with Antislip Aggregate #2 to achieve medium texture:

Strongcoat Primer S: 5 m²/kg.

Strongcoat HB400 (base coat): 0.4 kg/m².

Antislip aggregate #2: 2.0 – 4.0 kg/m².

Strongcoat HB400 (top coat): 0.6 kg/m².

Approximate system thickness: 2.0 mm.

Antislip coverage When used with Antislip Aggregate #3 to achieve fine texture:

Strongcoat Primer S: 5 m²/kg.

Strongcoat HB400 (base coat): 0.4 kg/m².

Antislip aggregate #3: 2.0 – 4.0 kg/m².

Strongcoat HB400 (top coat): 0.5 kg/m².

Approximate system thickness: 1.3 mm.

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STORAGE

Store in a dry area out of direct sunlight at temperatures between 5°C and 35°C.

SHELF LIFE

Strongcoat HB400 has a shelf life of 12 months from date of manufacture if stored in proper conditions and unopened packs.

If these conditions are exceeded, DCP Technical Department should be contacted for advise.

CAUTIONS

HEALTH AND SAFETY

Strongcoat HB400 should not come in contact with skin and eyes.

In case of accidental splashes to the eyes, rinse thoroughly with clean water and seek medical advise. Suitable protective gloves and goggles should be worn. Do not use solvent to clean Strongcoat HB400 from skin.

For further information refer to the Material Safety Data Sheet.

FIRE

Strongcoat HB400 is nonflammable. Strongcoat Primer S and DCP Solvent are flammable. Ensure adequate ventilation. Do not use near a naked flame and do not smoke during use.

Flash Point:
DCP Solvent: 37°C.

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- » Adhesives.
- » Tile adhesives and grouts.
- » Building products.
- » Structural strengthening.

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Note:

We endeavour to ensure that any information, advice or recommendation we may give in product literature is accurate and correct. However, because we have no control over where and how products are applied, we cannot accept any liability arising from the use of the products.

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