Strongcoat HB

High build solvent free epoxy floor coating

DESCRIPTION

Strongcoat HB is a high build, hard wearing, three-component, solvent free, epoxy resin coating, designed to provide a hard, gloss coating to concrete floors.

APPLICATIONS

Strongcoat HB 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.
- Hydrocarbon resistant.

STANDARDS

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

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 MPa 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.

TECHNICAL PROPERTIES:

Mixed density:	1.4 ± 0.05 g/cm³ @ 25°C
Solid contents:	100%
Pot life:	60 min @ 25°C 30 min @ 35°C
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 6319-2	≥ 68 MPa @ 25°C
Flexural strength: BS 6319-3	≥ 35 MPa @ 25°C
Tensile strength: BS 6319-7	15 MPa @ 25°C
Bond strength: ASTM D4541	2.0 MPa (concrete failure)
Water absorption: ASTM D570	< 0.1%
Taber abrasion resistance: (1000 g, 1000 cycle) ASTM D4060, weight loss CS17 wheel	70 milligram
VOC: ASTM D2369	< 20 g/ltr (comply with LEED)

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.

Don Construction Chemicals India Private Limited
Kaveripettai, Thiruvallur Dist., Chennai, Tamil Nadu
RIICO Industrial Area, Manda Chomu, Jaipur
India
info.india@dcp-int.com; marketing.india@dcp-int.com
www.dcp-int.com

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PRIMING

Strongcoat HB 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.

COATING

Use brush or lambs wool roller, or airless spray machine to apply the mixed Strongcoat HB onto the prepared surfaces. To get a film thickness of 400 microns, apply 2 coats of Strongcoat HB at 3.5 m²/kg per coat, second coat 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 120 - 150 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 HB top coat.

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

OCCASIONAL SPILLAGE

Chemical Resistance after full cure (7 days @ 25oC), ASTM D1308 (Spot - test @ 1 hr)

Organic Acids	
Oleic Acid sat.	RS
Citric Acid 25%	RS + SS
Inorganic Bases	
Sodium Hydroxide 50%	R
Ammonia Solution 10%	R
Potassium Hydroxide 50%	R
Aqueous Solutions	
Sodium Chloride sat	R
Tap Water	R
Chlorinated Water	RS
Dead Sea Water	R
Solvents	
White Spirit	R
Xylene	R
Toluene	R
Acetone	R
Ethanol	R
Ethyl Acetate	R
N Propanol	R
Methoxy Propanol	R
Oils & Fuels	
Benzyl Alcohol	R
Brake Fluid	RS
Engine Oil	R
Diesel	R
Kerosene	R
Detergents & Soaps	R
Inorganic Acids	
Sulphuric Acid 25%	RS
Phosphoric Acid 20%	RS
Hydrochloric Acid 10%	RS
Nitric Acid 10%	R

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REMARKS

- Strongcoat HB should not be applied at temperatures below 10°C or where ambient relative humidity exceeds 85%.
- Strongcoat HB should not be applied onto surfaces known to suffer from rising damp.
- In case of spray applications, airless spray machines should be used.
- In lighter colour shades, the product may experience accelerated yellowing over time, even indoors, particularly when exposed to heat from strong lighting (e.g., industrial discharge lamps, fluorescent lamps, metal halide or mercury vapour lamps).

CLEANING

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

PACKAGING

Strongcoat HB is available in 6 kg packs (4.25 litre) and in 18 kg packs (12.8 litre).

COVERAGE

Standard coverage:
Strongcoat Primer S: 5 m²/kg.
Strongcoat HB (base coat): 0.30 kg/m².
Strongcoat HB (topcoat): 0.30 kg/m².

Antislip coverage When used with Antislip Aggregate #2 to achieve medium texture:
Strongcoat Primer S: 5 m²/kg.
Strongcoat HB (base coat): 0.37 kg/m².
Antislip aggregate #2: 2.0 – 4.0 kg/m².
Strongcoat HB (topcoat): 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 HB (base coat): 0.37 kg/m².
Antislip aggregate #3: 2.0 – 4.0 kg/m².
Strongcoat HB (topcoat): 0.5 kg/m².
Approximate system thickness: 1.25 mm.

STORAGE

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

CHEMICAL RESISTANCE (3 DAYS IMMERSION)	
Hydrochloric Acid (HCl) 15%	R
Sodium Hydroxide (NaOH) 15%	R

R: Resistant
RS: Resistant with slight discolouration
SS: Slight softening

SHELF LIFE

Strongcoat HB has a shelf life of 12 months from date of manufacture if stored in proper conditions and un-opened packs.

If these conditions are exceeded, contact DCP Technical Department for advice.

CAUTIONS

HEALTH AND SAFETY

Strongcoat HB 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 advice. Suitable protective gloves and goggles should be worn.
Do not use solvent to clean Strongcoat HB from skin.

For further information, refer to the Material Safety Data Sheet.

FIRE

Strongcoat HB 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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- Structural strengthening.

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