



**Chem Coats (Pvt) Ltd.**

# ChemCoat 400 Hi Build

Hi-build epoxy floor coating

## DESCRIPTION

ChemCoat 400 Hi Build is an economical, four-component solvent-free epoxy flooring system comprising a clear resin and hardener, pre-packed filler and a ready to use pigment paste.

## USES

Floor coating in ablution blocks, walkways, food processing plants, hospitals and schools. May also be used as a binder for abrasive grit to yield non-slip floor finishes.

## BENEFITS

- Good protective qualities.
- Good resistance to chemicals.
- Reduces maintenance.
- Range of colours.
- Can be applied onto a variety of surfaces.
- Seamless and hygienic.

## SURFACE PREPARATION

## PRECAUTIONARY NOTES

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%.

Concrete substrate must have a minimum tensile strength of 1.5N/mm<sup>2</sup> preferably should be lightly vacuum blast cleaned leaving a uniform texture. All blemishes in the surface such as pop-outs, omegas, blowholes and honeycomb should be patched with ChemDermix 318. This should be left overnight to cure and shall then be rendered smooth. For a smooth final finish, the surface profile, peak to valley, should not exceed 25% of the coating thickness. If the surface is very irregular, consideration should be given to the use of a solvent free epoxy self-levelling primer.

## BONDING / PRIMING

ChemCoat 400 Hi Build is normally applied over a thoroughly sealed concrete surface using up to two coats of ChemCoat WD 337.

Over coating of the primer with ChemCoat 400 Hi Build should comply with the over coating time requirements laid down for the specific primer. The over coating time for ChemCoat WD 337 is 4-6 hours.



## PROPERTIES OF WET MATERIAL

Mixing ratio	As per attached table.
Density Resin Density MIX	1.084 Kg/L 1.526 Kg/L
Colours	Pale Grey RAL 7035 Med. Sea Grey RAL 7040 Drakensberg Green RAL 6019 Red oxide RAL 3009
Flash point	NA
Dilution	Do not dilute
Shelf Life	12 months from date of manufacture and in sealed containers @25°C

## PROPERTIES DURING APPLICATION

Pot life	approx. 40 min. (5 l mixed @ 25° C)
Work life	approx. 60 min (after spreading @25°C)
Volume solids	100%
Curing time @25° C	Touch : 8 hrs 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.	

## PHYSICAL PROPERTIES OF CURED FILM

Maximum service temperature	60°C
Shrinkage after cure	Negligible
Weather resistance	Chalks on external exposure
Chemicals Resistance	See attached chemical resistant chart

**CHEM COATS PRIVATE LIMITED** Monnoo Chowk, Defence Road, Off Raiwind Road, Near Nobel TV, Lahore, Pakistan. Tel: +92 42 35322201-03 Fax: +92 42 35322204  
www.chemcoats.com.pk, Email: info@chemcoats.com.pk



## MIXING

### PRECAUTIONARY NOTES

(1) A slow speed mixer must be used. Ensure that the mixing vanes are below the surface of the mix to minimize air entrapment. The stirrer mixing vane configuration should be such as not to introduce unwanted aeration. Also, for this type of mixing, transferring the base/activator combination to a new container i.e. "re-mixing" will eliminate contamination due to unmixed base which is inclined to cling to the walls of the original container.

(2) Where light colours (yellows/white etc.) are used, the addition of 2 units of pigment pastes per kit is advised to ensure opacity. A similar coloured primer is also recommended.

## COVERAGE

See last page of this data sheet

## APPLICATION

### PRECAUTIONARY NOTE

Prevailing weather conditions must be taken into account otherwise surface defects can occur (see under "properties of wet material").

ChemCoat 400 Hi Build should be applied by first pouring a bead of material in the form of a ribbon on the surface to be coated. Do not leave material in the container too long because it will set faster thus reducing the work life. Using a 2mm serrated trowel, spread the applied material at the specified rate. Apply as evenly as is possible, working from left to right, and then back. Approximately 10 minutes after application, roll using a porcupine roller to aid in excess air release. All over-coating times must be strictly adhered to. ChemCoat 400 Hi Build will not cure if applied at below 10° C

### Non-slip surface

This can be achieved by applying a coat of ChemCoat 400 Hi Build, and broadcasting into this coat, a suitable grit at the rate of 15-30 g/m<sup>2</sup>. When set, all unbounded grit is vacuumed away. The surface may be sealed with a second coat. Overcoat times of 48 hours maximum must be adhered to at all stages.

## CLEANING OF EQUIPMENT

ChemCoats super brush cleaner before setting.

## PROTECTION/MAINTENANCE ON COMPLETION

Enlist the services of experienced cleaning specialists. Furthermore, the following recommendation will go a long way to maintain the original appearance of the epoxy floor viz.

(1) Protect from trafficked dirt/grit ingress into coated area by using dirt traps etc.

(2) Use of a "renewable" clear high wear polymer based floor polish will reduce scratching and "black heel".

(3) Encourage frequent maintenance cleaning.

## PACKAGING

Small Pack (yield 7.1 l)

Resin: Base and Activator 5 l (Kit)

Hi-build Filler: 5 kg

Pigment paste: 0.35 kg

## HANDLING & STORAGE

All ChemCoat 400 Hi Build related products have a shelf life of 12 months if kept in a dry, cool store in the original, unopened packs. If stored at high temperatures and/or high humidity conditions, the shelf life may be reduced.

## HEALTH & SAFETY

Uncured ChemCoat 400 Hi Build is toxic. Always ventilate a working area very well during application and drying. Avoid naked flames in the vicinity. Avoid inhalation of fumes/dust and contact with skin and eyes. Suitable protective clothing, gloves, eye protection and respiratory protective equipment should be worn. The use of barrier creams provides additional skin protection. If contact with skin occurs, wash with water and soap. Splashes into eyes should be washed immediately with plenty of clean water and medical advice sought. Cured ChemCoat 400 Hi Build is inert and harmless

## IMPORTANT NOTE

The information given in this data sheet is based on current development work and many years of field experience. Whilst every effort is made to ensure that the information is reliable, we cannot accept responsibility for any work carried out with our materials as we have no controls over methods of applications, site conditions etc. In view of the continuing research and development being undertaken in our laboratories we advise customers in their own interest to ensure that this data sheet has not been superseded by a more up-to-date publication. All products are sold subject to our standard conditions of sale which are available on request. Field services, where provided, does not constitute supervisory responsibility. For additional information, please contact your local ChemCoats representative.

## RANGE OF PRODUCTS

WATERPROOFING SYSTEMS  
INDUSTRIAL FLOOR SURFACES  
PROTECTIVE COATINGS

PREPACKED REPAIR MORTARS  
CEMENTITIOUS & EPOXY GROUTS  
CONCRETE ADMIXTURES

SEALANTS  
CRACK INJECTION  
CONCRETE ADHESIVE



## Mixing ratios and mixing weights with appropriate yields

<b>Step 1</b>	Prepare surface as per data sheet
<b>Step 2</b>	Prime surface using ChemCoat WD 337, approximate coverage 8-10 m <sup>2</sup> / liter
<b>Step 3</b>	To the cured primed surface apply two coats of ChemCoat 400 Hi-build at 250 microns per coat, allowing each coat to cure. Over coating time minimum 12 hours and maximum 48 hours.

ChemCoat 400 Hi-build		
Product	Pack size	Qty.
Flooring resin kit (base + activator)	5 liter	1
ChemCoat 400 Hi-build filler	5 kg	1
Pigment paste	350 grams	1
Yield (1 liter / m <sup>2</sup> / mm thick)		7.1 liters
Approximate coverage @ 0.5 mm thick		14.2 m <sup>2</sup>

### Chemical Resistance Chart of ChemCoat 400 Hi-build:

ACETIC ACID	5%	OK
ACETIC ACID	10%	CHIPS AND BREAKS
AMMONIA	10%	OK
APPLE JUICE		OK
CAUSTIC	10%	OK
CAUSTIC	40%	OK
COKE		OK
DIESEL		OK
DISTILLED WATER		OK
HYDROCHLORIC ACID	10%	OK
HYDROCHLORIC ACID	30%	OK
LACTIC ACID	5%	OK
LACTIC ACID	10%	OK
LINSEED OIL (RAW)		OK
LUBRICATING OIL		OK
MALEIC ANHYDRIDE		OK
MEK		Crumbles initially, completely destroyed± 17 months
METHYLATED SPIRITS		Bleached, OK
NITRIC ACID	5%	Bleached, chips off & breaks when forced
NITRIC ACID	10%	Bleached, breaks when forced
ORANGE JUICE		OK
PETROL		OK
PHOSPHORIC ACID	10%	OK
PHOSPHORIC ACID	40%	Flexible, breaks easily
PHTHALIC ANHYDRIDE		Severely attacked after 3 days
STYRENE		Softened badly after 1 month
SULPHURIC ACID	10%	OK
SULPHURIC ACID	40%	OK
VEGETABLE OIL		OK
WHITE SPIRITS		OK
XYLOL		OK