



Chem Coats (Pvt) Ltd.

ChemFlo SL

Epoxy self-levelling flooring system

DESCRIPTION

ChemFlo SL is a four-component solvent-free self-levelling flooring surface system. The system comprises a clear resin and hardener system, pre-packed blended aggregate and a ready-for-use pigment paste.

USES

ChemFlo SL caters for high hygiene standards with good colour retention and a medium gloss finish.

Typical end-use locations are: Hospitals; schools; kitchens; factories; showrooms; laboratories; canteens; supermarkets; garages.

ChemFlo SL is not recommended for use in areas that are subjected to heavy mechanical impact and abrasion. For such applications, refer to **Chem Coats** Technical Sales division.

BENEFITS

- Good protective qualities.
- Seamless & Hygienic
- Colour retention
- Self-levelling
- Chemical resistant
- Wide variety of locations

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%. (preferably a Protimeter Survey Master or equivalent, or Dynamic Calcium Chloride moisture "weight gain" over 24 hours, or at 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 and 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 **ChemPrime SL**, a solvent free epoxy self-levelling primer.

BONDING / PRIMING

If **ChemPrime SL** is not used, then **ChemFlo SL** is normally applied over a thoroughly sealed concrete surface using up to two coats of **ChemCoat WD 337**.

Over coating of the primer with **ChemFlo SL** 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	See quantities under packaging for 5L Kit and
Density Resin Density MIX	1.084 Kg/L 1.765 Kg/L
Colours	Pale Grey RAL 7035 Med. Sea Grey RAL 7040 Drakensberg Green RAL 6019 Red oxide RAL 3009
Flash point	>100° C
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. (05 L Mix @ 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 temp.	60°C
Shrinkage after cure	Negligible
Weather resistance	Chalks on external exposure
Chemicals Resistance	Good resistance to water, oil, fats, greases, diesel, dilute acids, dilute alkalis. Table Attached



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MIXING

PRECAUTIONARY NOTES

When decanting base from bulk supply, thorough stirring must be accomplished beforehand.

In order to avoid colour variation in large expanses, one must ensure that the same pigment batch is used and is carefully and accurately dispensed (factory batching available on request). Proper mixing and proportioning of the epoxy binder (base and activator), filler and pigment is essential for good results with no colour variation from mix to mix. Transfer pre-measured volume of flooring base resin to mixer. Add pigment and activator and homogenize. Add filler slowly and mix well.

NOTE:

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.

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").

ChemFlo SL 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 5mm 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. **ChemFlo SL** will not cure if applied at below 10° C.

CLEANING OF EQUIPMENT

ChemCoats 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.

MODEL SPECIFICATION

Four component self-leveling, solvent free epoxy flooring system.

The flooring system will be **ChemFlo**, a four-component, self-leveling, solvent-free epoxy flooring system comprising a resin hardener system, pre-packed aggregates and pigment in accordance with **Chem Coats Construction Chemicals'** recommendations including all necessary primers (**ChemCote WD 337**).

PACKAGING

Small Pack (yield 10 l)

Resin: Base and Activator 5 l (Kit)

ChemFlo Filler: 10 kg

Pigment paste: 0.35 kg

HANDLING & STORAGE

All **ChemFlo SL** 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 **ChemFlo SL** 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 **ChemFlo SL** 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 advice 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

<u>WATERPROOFING SYSTEMS</u> <u>INDUSTRIAL FLOOR SURFACES</u> <u>PROTECTIVE COATINGS</u>	<u>PREPACKED REPAIR MORTARS</u> <u>CEMENTITIOUS & EPOXY GROUTS</u> <u>CONCRETE ADMIXTURES</u>	<u>SEALANTS</u> <u>CRACK INJECTION</u> <u>CONCRETE ADHESIVE</u>
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Mixing ratios and mixing weights with appropriate yields:

Step 1	Prepare surface as per data sheet
Step 2	Prime surface using ChemCoat WD 337 , approximate coverage 10 m ² / liter
Step 3	To the cured primed surface apply the ChemFlo SL at 2 mm thick and allow curing.

ChemFlo SL		
Product	Pack size	Qty.
Flooring resin kit (base + activator)	5 liter	1
ChemFlo SL filler	10 kg	1
Pigment paste	350 grams	1
Yield (1 liter / m ² / mm thick)		10 liters
Approximate coverage @ 2 mm thick		5 m ²

Chemical Resistance Chart of ChemFlo SL:

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 ± 17 months
METHYLATED SPIRITS		Bleached, OK
NITRIC ACID	5%	Bleached, chips off & breaks when Bleached, breaks when forced
NITRIC ACID	10%	
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