Chem Coats (Pvt) Ltd.

ChemFlo HPU

Four component polyurethane self-levelling, chemical resistant floor system

DESCRIPTION

ChemFlo HPU is a four-component polyurethane self-smoothing topping available in a range of matt colours.

USES

ChemFlo HPU provides a hard-wearing floor finish with exceptional chemical resistance. Typical areas of application include Food processing factories, Chemical processing plants, and Pharmaceutical production for use in wet and dry process areas where the floor is subjected to heavy traffic, impact and chemical attack.

BENEFITS

- Impact resistant.
- Seamless and hygienic finish, no crevices where dirt and bacteria can collect.
- Excellent chemical resistance.
- Easy to clean and sterilize, low maintenance requirement.
- Matt finish.
- High abrasion resistance.
- Low odour during installation.

COLOURS

ChemFlo HPU is not colour stable and may discolour on ageing; this is more noticeable in light colours. This will not impair its chemical resistance. Where colour matching is required over more than one order or delivery, **Chem Coats** Technical Department must be contacted prior to placing the order(s) and the requirement stated clearly on all orders relating to the project(s). The colour range includes dark green, mid grey, mustard and red.

CAUTIONARY NOTE:

Variations in aggregates can cause variations in floor colour. Although every effort is made to keep product colours consistent, it is advisable to use product from the same batch in specific areas. Products can be pre blended to further limit colour variations.

SURFACE PREPARATION

Substrate must be concrete or polymer modified screed above 25 MPa compressive strength. Totally enclosed heavy shot blasting or scarification should be used to remove all residues to provide a dry, dust-free open textured surface with exposed aggregate. Anchor grooves, minimum 4 mm wide x 4 mm deep, must be formed at all edges, bay joints, columns doorways, drains and at regular centres across the floor. Generally, groove width and depth is 2X screed thickness.
If time constraints (or any other) results in application of screed short of these anchor groves, then cut new groves to finish off application and start next application with new groves.

BONDING / PRIMING

PU/HPU primer is recommended as a pore sealer and must be allowed to cure. Priming must be undertaken in the late afternoon (i.e. declining substrate temperature).

COVING

Use relevant ChemScreed coving grade colour with appropriate primer for coving and/or vertical applications.

PROPERTIES DURING APPLICATION	23° C	33° C
Pot life	20 min.	10 min.
Light Foot Traffic	24 Hrs	18 Hrs
Full Traffic	48 Hrs	24 Hrs
Fully Cured	7 Days	5 Days
Density	1.9 Kg/Liter	
Coverage	7.6 Kg/m^2 at 4mm	
Packaging	20 Kgs Four component kits	

PROPERTIES OF DRY FILM	
Compressive strength	approx. 58 MPa
Flexural strength	approx. 18 MPa
Tensile strength	> 10 MPa
Coefficient of expansion/ºC	3.5 x 10^{-5}
Bond strength	>cohesive strength of concrete
Impact resistance	>0.5mm (BRE screed tester)
Thermal conductivity	0.90 W / ° C
Temperature resistance	85º C

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

Water absorption to Campden test TSSH008	Nil

MIXING

Kit components are pre-weighed for optimum performance. Never split or proportion kits. The prescribed aggregate must be used as supplied in kit form and not substituted with an alternative. Do not mix by hand.
A forced action pan mixer is recommended. Charge pan with Base component. Add Hardener component to the Base component and mix for approx. 30 sec until colour is a uniform cream colour. Add Aggregate component and mix for at least 3 minutes, until the mixture is uniform.

COVERAGE

7.6 Kg/m^2 at 4mm

APPLICATION

Within one minute after mixing, spread the topping onto the primed floor to the required thickness using a steel bladed trowel, or pin rake set to the correct depth. Within 3 minutes of application, roll with a spiked roller Lay abutting mixes within 3 minutes of application of previous mix. Maximum bay width is 5m.

CLEANING OF EQUIPMENT

ChemCoats brush cleaner before setting.

PROTECTION/MAINTENANCE ON COMPLETION

Protect surface against traffic and spillage until cured.

MODEL SPECIFICATIONS

The floor topping will be **ChemFlo HPU,** a four-component polyurethane self-leveling floor topping applied in accordance with **ChemCoats Construction Chemicals'** recommendations.

PACKAGING

ChemFlo HPU is supplied in 20 kg packs, consisting of Base, Activator, Pigment Paste and Aggregate.

HANDLING & STORAGE

All **ChemFlo HPU** 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

When wet, **ChemFlo HPU** is toxic and flammable. Ensure working area is well ventilated during application and drying. Avoid flames in vicinity. Avoid inhalation of 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.

When cured, **ChemFlo HPU** 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

WATERPROOFING SYSTEMS INDUSTRIAL FLOOR SURFACES PROTECTIVE COATINGS	PREPACKED REPAIR MORTARS CEMENTITIOUS & EPOXY GROUTS CONCRETE ADMIXTURES	SEALANTS CRACK INJECTION CONCRETE ADHESIVE

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Chemical Resistant Chart for ChemFlo HPU

CHEMICAL PROPERTIES OF DRY FILM			
CHEMICAL RESISTANCE	**EXCELLENT**	**GOOD**	**LIMITED**
ACIDS			
Citric 10%	+		
Acetic 10%	+		
Lactic 5%	+		
Sulphuric 20%	+		
Hydrochloride 20%	+		
Nitric 20%	+		
Phosphoric 20%	+		
ALKALI			
Sodium Hydroxide 70%	+		
Ammonia 10%	+		
SOLVENTS			
Engine oil	+		
Hydraulic oil	+		
Petrol	+		
Diesel	+		
Kerosene	+		
Acetone			+
Butanol	+		
Skydrol	+		
Xylene	+		
Toluene	+		

Consult **Chem Coats** for more specific requirements.

Excellent =

No change in product even after long-term contact.

Good =

No change in the product after one month contact, either no long-term test results, or some change after long-term contact.

Limited =

Will resist 2 - 3 hours before irreversible damage will occur or is destroyed.

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