

FloArm Top HPU 4 Plus

Formerly known as FloArm Top HPU (E)

3 – 4 mm Heavy Duty Polyurethane Floor Topping.
(HD PUR Technology with High Resistance to Aggressive Chemicals)



TECHNICAL DATA SHEET

Product Description

FloArm Top HPU 4 Plus provides a smooth protective floor finish suitable for applications in dry or wet environment. It is recommended for floors having chemical and physical abuses. FloArm Top HPU 4 Plus is a dense and impervious system providing an ideal floor finish for applications in food, pharmaceutical and manufacturing industries including clean room, laboratory and warehouses, wherever a robust, low maintenance and durable floor is required.

Uses

- Chemical plants
- Dairy, Food and Beverage industries
- Abattoirs
- Electronic component, manufacture & assembly
- Agrochemical and Oil industry
- Textile industry
- Pharmaceutical production
- Semi conductor industry
- Warehousing and storage

Features and Benefits

- Hard wearing - durable and abrasion resistant
- Fast application leading to quick hand over
- Low maintenance costs and low down time
- Resistant to a wide range of chemicals and liquids
- Seamless – easily cleaned to maintain high standards of hygiene
- Low VOC
- Food Grade and microbiologically inert
- High thermal shock resistant
- Also available in antistatic variety
- Resists cleaning temperatures of up to 80°C at 4 mm thickness

Application Methodology

Step no.1: Surface Preparation

The concrete substrate must be sound and of sufficient compressive strength (minimum 20 N/mm²) with a minimum pull off strength of 1.5 N/mm². The substrate must be level, clean, dry and free of all contaminants such as dirt, oil, grease etc. All previous floor coating if any must be mechanically removed to the maximum extent possible. It is acceptable to re-lay on floor coating that has a firm bond (pull out strength of 1.5 N/mm²).

Concrete substrates must be prepared mechanically depending upon surface condition using abrasive blast cleaning or scarifying or grinding to remove cement laitance and achieve an open textured surface. Weak concrete must be removed and surface defects such as blowholes and voids must be fully exposed. Repairs (blow holes/voids and surface leveling) to the substrate must be carried out using appropriate repair product. The concrete or screed substrate has to be primed or leveled in order to achieve an even surface. All dust, loose and friable material must be completely removed from surfaces before application of the product, preferably by brush and/or vacuum.

Ensure moisture content of the concrete surface below 4% - no rising moisture according to ASTM D 4263 (Polythene Sheet Method) and above 3°C dew point.

Groove cutting:

To offset shrinkage failure, grooves must be cut along the perimeter of the concrete substrate. These grooves should be cut 100 mm from the walls/periphery. For large areas have grooves for every 3m by 3m. This would include all columns, machines and also along doorways.

Finishing edges and day joints should also have grooves. Grooves should be twice in thickness and depth to the thickness of the floor, typically 8 mm deep by 8 mm wide for a 4 mm thick floor. Clean the prepared grooves with air gun and remove all loose particles before application of primer and to be filled with Scratch Coat "FloArm Top HPU 4 Plus. FloArm TOP HPU SC to be used as scratch coat where surface has more porous".

System of Application:

1. Groove Cutting
 2. Surface Preparation
 3. Primer / Scratch Coat Application (FloArm HPU 4 Plus)
 4. FloArm Top HPU 4 Plus application
 5. Sealing coat of FloArm Coat PUD clear - Matt or Glossy (optional).
- This is a specialised application requiring the laying to be done by a trained personnel.

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Step no. 2: Application of Primer / Scratch coat:

Primer :- The concrete surface after proper and thorough surface preparation has to be primed with FloArm Primer 1260. The primer is a solvent free resin system. It is designed for better adhesion with the substrate and the flooring system. The primer should be mixed in the given proportions supplied. The entire contents of the hardener should be poured into the base and should be mixed using a low speed drill machine with an attachment for about 3 minutes @ (150-200 RPM) to get a homogeneous mix. Once mixed, the primer should be applied immediately on to the prepared concrete surface. After priming, the surface has to be kept for drying - approximately 8-12 hrs. For more information refer Primer TDS.

Ensure that the grooves during priming do not get filled with the primer. This ensures proper anchorage of the FloArm Top HPU 4 Plus with the substrate.

Scratch coat for new Concrete:

Scratch Coat will be tolerant to residual substrate moisture only (RCC only, not moisture humidity of total base floor) and can be installed directly onto 14 day old concrete. Concrete floor must be provided with functioning DPM course membrane and prepared with scarifier. Concrete humidity should be measured with ASTM F 2170-18 with concrete humidity meter. It should not be More than 80%.

For abnormally high surface moisture or in sunken areas, proper moisture check is to be carried out and if required, use of special primers FloArm Primer 1250 (System).

Step no. 3: Product Mixing

Pre weighed Base and Pigment to be mixed with special design mixer (slow speed planetary double rotary mixer) first for 2 minutes till the pigment disperses properly. Add the entire qty of hardener into the mix and then agitate for another 30 seconds. Then add entire qty of filler component and mix it for two to three minutes till the homogeneous mass is obtained.

Step no.4: Product application:

After mixing immediately spread it on the primed/scratch coat concrete floor. Spread the material with a notch trowel of notch size between 8-10 mm. Ensure the grooves are properly filled in and is without any visible depressions.

As the pot life of the product is only 10 to 12 minute, ensure during trowelling that all joints during sequential application are applied on wet on wet.

Finish the laid floor with a spike roller. Application (spreading and spike roller application) needs to be done very fast once mixing is over.

Chemical Resistance

FloArm Top HPU 4 Plus is resistant to a wide range of liquids and chemicals.

Reagent	Concentration in%	HPU
Ammonia, Aqueous	30	R
Potassium Hydroxide	25-50	R
Butanol		R
Castor oil		R
Citric acid	20	R
Hydrofluoric	3-4	R
Beer		R
Crude oil		L
Fats		R
Glycerine		R
Fatty Acids	100	R
Acetic acid	25	R
Aniline		R
Lactic acid	25	R
Methanol		L
Milk		R
Muriatic acid	36	R
Oleic acid		R
Phenol	5	L
Skydrol		R
Sulphuric acid	45	R
Urea	50	R
Hydrogen Peroxide	50	L
Sodium Carbonate	Saturated	R
Cottonseed Oil		R
Benzole-Alcohol Mix		R
R	Resistant	28 Days +
L	Limited Resistance	up to 7Days
N	Not Resistant	

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Technical data:

Mixed Density , gm/cc	Approx. 1.80
Pot life @ 23°C	8 -12 minutes
Compressive strength in N/mm ² (ASTM C579)	7 days : min.40 28 days:48 - 51
Tensile strength 28 Days (ASTM C307)	8 N/mm ²
Flexural strength 28 Days ((ASTM C580)	21 N/mm ²
Adhesive pullout bond strength in N/mm ² 28 Days (ASTM D4541)	> 1.5 N/mm ² (concrete failure)
Taber abrasion resistance (1000 g, 300cycles) weight loss, mg (ASTM D4060)	H18 : 115 mg
Shore D Hardness	Approx. 85
Slip resistance (ASTM E 303)	Dry: > 70 Wet: > 40
Impact resistance	Satisfactory
Water absorption	0 ml
Surface spread of flame (BS 476: Part 7)	Class 2 (indicative)
Foot traffic @ 30°C	After 24 hrs
Light traffic @ 30°C	After 48 hrs
Full traffic@ 30°C	After 60 hrs
Full cure @ 30°C	After 7 days
Surface resistivity (DIN EN1081)	>1 Giga ohms
High Impact resistance:	Classified 'High Impact Resistance' under BS 8204: Part 1: 1999
Food grade :	Conforms to the specifications as per U.S FDA 175.300
Application Temperature	Min +18°C Max +30°C
Service Temperature	From -5°C to +60°C (3mm) From -15°C to +80°C (4mm)

The performance data is typical and based upon controlled lab conditions. Actual performance of the job sites may vary from the above values based on actual site conditions.

Colours

FloArm Top HPU 4 Plus is available as per MYKA Shade Card. FloArm Top HPU 4 Plus floor systems have been formulated to provide the very highest chemical and heat resistance.

UV Resistance:

As a direct result some yellowing of the installed floor will occur in areas of direct UV exposure. This is most apparent in lighter colours.

This may leads to colour variation in due to course of time after application which is more significant in light colours

Cleaning & Hygiene

Regular cleaning and maintenance will enhance the life and appearance of any floor. FloArm Top HPU 4 Plus is readily cleaned with industry standard cleaning chemicals and equipment. Please consult your local cleaning chemical or equipment supplier.

Aftercare - Cleaning and Maintenance Clean regularly using a single or double headed rotary scrubber drier in conjunction with a mildly alkaline detergent

Consumption

FloArm Top HPU 4 Plus
3 mm application: 5.4 kg/m²
4 mm application: 7.2 kg/m²

Packaging

20.5 Kgs pack (Base + Pigment paste + filler + Hardener)



Flooring & Coatings

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Storage and shelf life

6 months from date of production in covered warehouse conditions, above 5°C and below 25°C and out of direct sunlight. Materials must be raised off the floor and kept dry. Application Condition For best results materials, substrate and air temperature should be in the range 18 - 22°C. Whilst FloArm Top HPU 4 Plus will cure out effectively over a wide range of temperatures the optimum appearance is most readily achieved under good site conditions

Health and Safety

During mixing and application the following precautions should be observed: Ensure adequate ventilation and avoid contact of the material with the eyes, nasal passages, mouth and unprotected skin. Avoid contact with the hands by wearing protective gloves and by using, if necessary, a suitable barrier cream. In case of contact with the eyes, rinse immediately with plenty of water and seek medical advice and after contact with the skin wash immediately with plenty of soap and water. Prolonged contact with the skin should be avoided, especially where the user has an allergic reaction to resin-based materials. Always wear gloves and eye/face protection as necessary. Observe personal hygiene, particularly washing the hands after work has been completed or at any interruption whilst work is in progress. Care should be taken when removing gloves to avoid contaminating the insides. In case of accidents seek medical advice.

Legal Note

The information, and, in particular, the recommendations relating to the application and end-use of MYK Arment products, are given in good faith based on MYK Arment current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with MYK Arment's recommendations. In practice, the difference in materials, substrates and actual site conditions are such that no warranty in respect of merchant ability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application & purpose. MYK Arment reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local product data sheet for the product concerned, copies of which will be supplied on request.



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Product Categories Available



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