

FloArm Top HPU 2

(Formerly known as MYK INDUFLOOR PUMF 200 (I))

2-3 mm Heavy Duty Polyurethane Floor Topping
(HD PUR Technology with High Resistance to Aggressive Chemicals)



TECHNICAL DATA SHEET

Product Description

FloArm Top HPU 2 provides a smooth protective polyurethane resin floor finish combining outstanding wearing properties with high chemical resistance and having a matt finish. It is ideally suited in aggressive areas where a seamless, joint free finish is required and maximum cleanliness is essential. It is dense and impervious providing the ideal floor finish for applications in food processing, pharmaceutical and manufacturing industries including clean room, laboratory, packing areas, abattoirs and warehouse applications and wherever a robust long lived floor is required.

Uses

FloArm Top HPU 2 is recommended for floor conditions requiring the maximum chemical resistance and where a smooth, even and easy to clean surface is required. Specific applications include:

- Chemical plants
- Dairy, Food and beverage production
- Electronic component manufacture & assembly
- Agrochemical and Oil industry
- Confectionery production
- Textile units
- Pharmaceutical production units
- Auto & Engineering 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
- Also available in antistatic variety
- Low cost re-coating solution
- Resists dry heat of up to 80°C

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 re moved 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. Groove should be cut 100 mm from the walls/periphery. For large areas it is preferred to have grooves for every 5m by 5m in a grid. This would include all columns, machines and also along doorways.

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Finishing edges and day joints should also have grooves. Grooves should be twice in thickness and depth to the thickness of the floor, typically 4 mm deep by 4 mm wide for a 2 mm thick floor. Clean the prepared grooves with air gun and remove all loose particles before application of primer "FloArm Primer 1260" or Scratch Coat "FloArm Top HPU SC".

System of Application:

1. Groove Cutting
2. Surface Preparation
3. Primer / Scratch Coat Application
4. FloArm Top HPU 2 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.

Step no. 2: Application of FloArm Primer 1260:

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 - approx 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 2 with the substrate.

Priming for new or moist Concrete:

FloArm Top HPU SC (Scratch Coat) is tolerant to residual substrate moisture and can be installed directly onto 14 day old concrete.

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.

Step no. 3: Mixing and Application of Topping System:

Application of FloArm Top HPU 2 is to be done ideally during low or artificially controlled temperature. If the temperature is above 35°C, consult MYKA Application team.

Pre-weigh Base and Pigment paste and mix with slow speed Planetary double rotary mixer, initially for 2 minutes till the pigment disperses properly and then add entire qty of hardener in to it and again mix it for 30 seconds. Then add entire qty of filler component and mix it for two to three minutes till a homogeneous mass is obtained. Immediately spread it using a 5mm V-Notch trowel on the cured primed surface. Finish it with a spike roller. Do not re-roll later, as the pot life of the product is only 10 to 12 minutes. The work area should be protected during the installation process. Ensure that no airborne dust contaminates the surface of the wet resin as this will lead to unwanted blemishes in the hardened, cured surface.

The product should ideally be stored in a cool area or in an air-conditioned room few hours before application. Wet to wet joints to be covered within 5 - 6 minutes.

All movement joints must be properly treated. Construction joints and cracks, not subjected to movement may be overlaid.

Curing:

Normally FloArm Top HPU 2 floors can be put into service after 72 hours air curing at 30°C temp.

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TECHNICAL DATA SHEET

Technical data

Mixed Density , gm/cc	Approx. 1.70
Pot life @ 23°C	8 -12 minutes
Compressive strength in N/mm ² (ASTM C579)	28 days: 48 - 51
Tensile strength 28 Days (ASTM C307)	7 N/mm ²
Flexural strength 28 Days ((ASTM C580)	18 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)	CS17 wheel: 125 H22 wheel 1500
Shore D Hardness	80
Slip resistance (ASTM E 303)	Satisfactory
Water absorption	0 ml
Surface spread of flame (BS 476: Part 7)	Class 2 (indicative)
Foot traffic @ 30°C	After 36 hrs
Light traffic @ 30°C	After 48 hrs
Full traffic@ 30°C	After 72 hrs
Full cure @ 30°C	After 7 days
Surface resistivity (DIN EN1081)	>1 Giga ohms
Application Temperature	Min +18°C Max +30°C
Service Temperature	From -5°C to +80°C

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.

Chemical Resistance

FloArm Top HPU 2 is resistant to a wide range of liquids and chemicals, for specific information please refer to the following "Chemical Resistance" chart.

Reagent	Concentration in %	HPU
Ammonia, Aqueous	30	R
Potassium Hydroxide	25-50	R
Butanol		R
Castro 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
Benzyl-Alcohol Mix		R
R	Resistant	28 Days+
L	Limited Resistance	up to 7Days
N	Not Resistant	

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UV Resistance:

Yellowing and fading of color will occur in areas of direct UV exposure. This is most apparent in lighter colours.

Colour:

FloArm Top HPU 2 is available as per MYKA Shade Card.

Limitation:

A colour variation of 10 to 15 % is expected over time. However, this does not change the performance of the product.

Consumption

FloArm Top HPU 2:
2 mm application: 3.40 kg/m²

Packaging

18 kgs pack (Base + Pigment paste + filler + hardener)

Cleaning

FloArm Top HPU 2 can be cleaned from tools and equipment by using "FloArm Clean PU" immediately after use. Any hardened material will need to be removed mechanically.

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 material, substrate and air temperature should be in the range 18 - 22°C. Whilst FloArm Top HPU 2 will cure out effectively over a wide range of temperatures the optimum appearance is most readily achieved under good site conditions.

Health & Safety

For full information on Health and Safety matters regarding this product the relevant Health and Safety Data Sheet should be consulted. The following general comments apply to all products. As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs, (which may also be tainted with vapour until the product is fully cured and dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Keep away from children and animals. Reseal containers after use.

Annotation

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 (do not use solvents). 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.

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TECHNICAL DATA SHEET

Product Categories Available



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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