

FloArm Top HPU AS

(Formerly known as MYK INDUFLOOR PUMF-AS)

Antistatic heavy duty HYBRID PU flooring for
Resistance $<10^6$ Ohm



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Product Description

FloArm Top HPU AS is Hybrid polyurethane resin floor system, which is used where, Flooring required for heavy duty, chemical resistant, microbial growth resistant and antistatic properties. It can be applied 4 mm, with smooth matt colored finish.

The FloArm Top HPU AS Resin system provides highest chemical and heat resistance. It has good Impact Resistance With high mechanical strengths and elastic modulus, FloArm Top HPU AS is very resilient and with stand severe impact loads. On Exposure of UV, FloArm Top HPU As will result in Yellowing, but not affecting the physical performance.

Uses

- Semi-Conductor manufacturing unit
- Electronics and component assembly
- Clean rooms
- Pharmaceutical production – Bulk / Formulations
- Explosive and ammunition storage & handling
- Textile and fibre production
- Chemical plants
- Solvent storage area
- Wet and dry process areas where the floor is subjected to heavy traffic, impact and chemical attack.

Features and Benefits

- Heavy duty, hard-wearing floor finish with exceptional chemical resistance.
- Hygiene floor – Seamless, non-tainting.
- Very high chemical resistance
- Easy to clean and sterilize–minimal joints
- High abrasion resistance
- Low odour during application
- Option to steam clean available with additional thickness built-up.
- Antistatic resistance tested as per DIN 51953 and EN 1081

Application Methodology

Substrate Quality

The concrete substrate must be sound and of designed Compressive strength (minimum 20 N/mm^2) with a minimum pull off strength of 1.5 N/mm^2 and moisture should be below 5%. The substrate must be leveled, clean, dry and free of all contaminants such as dirt, oil, grease etc.

The concrete or screed substrate must be hard, sound surface.

Step No. 1: Surface preparation:

All previous floor coating, if any, must be mechanically removed to the maximum extent possible. It is acceptable to relay on floor coating that has a firm bond (having min pull out strength of 1.5 N/mm^2).

Concrete substrates must be prepared mechanically using abrasive blast cleaning, scarifying or grinding equipment 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.

Preparation of Grooves and filling:

Cut grooves with cutting machine at the floor (approx 6 Cm distance from the wall). Also make grooves in grid of $3\text{M} \times 3\text{M}$ square in large area. Also grooves to be prepared in floor around all columns and all machines area. Grooves sizes should be as thick as the floor thickness and depth should be double of floor thickness. Clean the prepared grooves with air gun and remove all loose particles, dust etc. Before application of primer FloArm Primer 1260, fill the groove with HPU material. Grooves preparation and filling before primer application is mandatory. Consult MYK Arment Technical Cell for guide on grooves design in your floor area.

Step 2: 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 epoxy resin system. It is designed for better adhesion with the substrate and flooring system.

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The primer should be mixed in the given supplied proportions. 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 proper mixing, Primer should be applied immediately on to prepared concrete surface. After priming, surface has to be kept for drying approximately 12-16 hrs or depending on the ambient temperature before proceeding to lay FloArm Top HPU 2/HPU E as leveling coat as per designed thickness.

Step 3: Levelling Coat:

After drying of primer, apply FloArm Top HPU 2 by using V notch (4 mm size) trowel. For Product mixing refer TDS of FloArm Top HPU 2.

Step 4: Under coat primer: FloArm SL Conductive Undercoat system consists of two component resins coating for electrostatic conductivity. (refer TDS for more details application). Apply Undercoat primer on dried and leveled surface of Levelling coat. Drying of Undercoat primer may take 24 to 48 hrs. It will depend on environment temp. *Do not allowed to walk on dried surface of Primer, Check resistance reading on undercoat primer, Apply FloArm Top HPU AS as early as possible on undercoat primer.

Step: 5 Mixing and Application of topping :

Application of FloArm Top HPU AS is to be preferably done ideally during low or artificially controlled temperature. Surface and air temp of application time should be 18 –25 deg. FloArm Top HPU AS is consist of four component. Preweighed component Base and pigment paste would be mix with special design (slow speed Planetary double rotary type) mixer. Initially mix for 2 minutes, till the pigment disperse properly, Then add entire qty of hardener in to mixing container, and again mix the mass for 30 seconds. Then add entire qty of filler component and mix it for two to three minutes till the homogeneous mass is obtained. After Mixing immediately spread mixed material on the primed concrete floor and finish it with spike roller. As the pot life of the product is only 10 to 12 minutes only, do not re-roll later. The work area should be protected during the installation process and the initial curing time to ensure that no air borne debris can contaminate the surface of the wet floor, as this will lead to unwanted blemishes in the hardened, cured surface. Ensure that the covering of wet joints to be completed Within the 10 minutes. The product should ideally to be store in an air-conditioned room a few hours before application. The troweling span as small as so that we can cover the



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wet joints within the surface drying. Application (spreading and spike roller) application) needs to be done very fast once mixing is over.

Curing:

Normally FloArm Top HPU AS floors can be put into service after 48 hours air curing at 30°C temp.

Note for Conductive Grid:

A network of 10mm wide, self-adhesive, conductive copper tape is always recommended in combination with any MYK arment antistatic flooring system. The copper tape must be applied directly onto the cured primer/ Scratch Coat applied area, copper tape to be applied 150mm away from the perimeter of the application. A further grid of tape should be applied within this area at 3m centres. Special attention should be paid to tape areas passing over expansion or bay joints to ensure permanent electrical continuity. The applied tape matrix should be secure and fully bonded to a confirmed earth point.

All movement joints in the sub-floor must be carried through the topping and properly sealed. Construction joints and cracks not subject to movement may be overlaid. If the floor move in any way, defects will reflect through the system. Isolation joints will need to be allowed for topping in areas where high thermal movement is anticipated, e.g. around ovens and freezers etc.

Cleaning:

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

General Instruction:-

Do not apply to damp substrates. Do not apply when atmospheric condensation is occurring or likely to occur before full cure is obtained, i.e. when the substrate temperature is within 3°C of the dew-point. One or more coats of primer may be required depending upon the condition and porosity of the concrete substrate. Light broadcasting with silica quartz sand (0.5 - 0.7 mm) @ 0.100 gms per m² is advisable on the wet primer to assist bonding.

If 1 kg or more of mixed material is left in the mixing container for more than 10 minutes it will react strongly giving off considerable heat. This should be avoided but if it does occur then the container should be placed outside until reaction is complete.

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Installation Service:

The installation should be carried out by a FloArm approved applicator with a documented quality assurance scheme. Obtain details of our approved contractors by contacting our customer service team

Environmental considerations:

The finished system is assessed as non- hazardous to health and the environment. The long service life and seamless surface reduce the need for repairs, maintenance and cleaning. Environmental and health considerations are controlled during the manufacture and application of the products by MYK arment staff and fully trained and experienced contractors.

Substrate Requirements:

Concrete or screed substrate should be a minimum of 25N/mm², free from laitance, dust and other contamination .Ensure moisture content of concrete surface below 4 %, No rising Moisture/dampness according to ASTM D4263 (polythene sheet method).If There is no Damp proof membrane is present.FloArm Primer 1250 can be incorporated directly beneath the FloArm Top HPU AS system.

Products Included in this System

Groove cutting:

4mm width and 8 mm depth in grid fashion of 3MX 3M and all periphery of area for 4 mm application.

Primer:

FloArm Primer 1260 @ 0.25kg/m²

Levelling Coat:

FloArm Top HPU 2 @ 3.8kg/m² for 2 mm

Copper tape:-

FloArm copper tape in Grid of 3mX 3M and all periphery

Under coat Primer:

FloArm SL Conductive under Coat
Under coat primer @ 0.166 kg/m² Test electrical resistance when primer has cured.

Topping:

FloArm Top HPU AS: 3.8kg/m².

Detailed application instructions are available upon request.

Colours:-

FloArm Top HPU AS is available in Dark Grey, Green, cream, buff Yellow, Orange, Red, colors.



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Durable / long life- Wide chemical resistance, wear and impact resistant, resists temperature from -20°C to 80°C

Specification:

The floor finish shall be FloArm Top HPU AS from MYK Arment Pvt Ltd installed at 4 – 6 mm in accordance with the manufacturers' instructions.

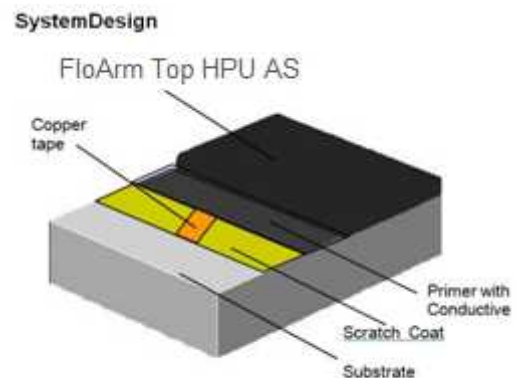
Product: FloArm Top HPU AS

Finish: Matt

Thickness: Min. 4 mm

Colour:as per shade card

System image:



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Technical Data

Density gm/cc (BS6319:Part 5)	1.600
Compressive Strength, (MPa)(BS6319:Part 2)	48-53
Tensile Strength (MPa) (ISO R527)	9
Flexural Strength (MPa) (ISO 178)	21
Compressive Modulus (MPa)(BS 6319 – Part 6)	3250 – 4000
Concrete Adhesion (EN 13892 - 8)	$>1.5 \text{ N/mm}^2$ (Concrete Failure)
Coeff. Thermal Expansion ($^{\circ}\text{C}^{-1}$) (ASTM C531:Part 4.05)	$3.6 \times 10^{-5} \text{ }^{\circ}\text{C}^{-1}$
Thermal Conductivity (BS 8740)	$0.9 \text{ W/m}^{\circ}\text{C}$
Water absorption (CP:BM 2/67/2)	0 mL
Fire Resistance (EN 13501: Part 1)	BFL – S1
Resistance to earth (Ω) EN 1081 (system)	$< 10^6$
Resistance of man to earth (M Ω)(EN 61340-4-5)	$<35 \text{ M}\Omega$
Body voltage generation(V)	$<100 \text{ V}$
VOC content (V) HK prod CodemP10-05)	10 g/L
Skid Resistance ASTM E303	>35
Service temperature 4 mm	-15°C to 70°C
Taber abrasion resistance (1000 g, 1000cycles) (ASTM D4060) weight loss, mg	CS17 wheel: 125 : H22 wheel 1500
Surface spread of flame (BS 476:Part 7)	Class 2

Samples cured for 28 days at 30°C .The performance data is typical and based upon controlled laboratory conditions. Actual performance on the job site may vary from these values based on actual site conditions.

Standard Color Chart

Reagent	Concentration in %	HPU AS
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
Benzole-Alcohol Mixture		R

R	Resistant	28 Days +
L	Limited Resistance	up to 7 Days
N	Not Resistant	

Note: these results are based on immersion testing and MYK Arment products may appear less resistant when compared with other manufactures surface swab test results.

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Packaging

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

Shelf Life

Shelf life is 6 months

Annotation

MYK Arment products are guaranteed against defective materials and manufacture, and are sold subject to its standard Terms and Conditions of Sale, copies of which can be obtained on request. Further Information: To ensure you are specifying a staff or purpose flooring system for your project please consult our Technical Advisors on the number below or visit our website to register your interest in specifying one of the most durable floor son the market.



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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). Treats splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Keep away from children and animals. Reseal containers after use. The information given in the data sheet is based on the years of experience, and found correct to the best of our knowledge. However the success of the product & its application is dependent on many external factors. We are fully assured of our products quality at the time of dispatch. As we are constantly end eavoring to enhance the quality of our products which may reflect. Changes in the data sheets. Hence in the event of any doubt on critical parameters it is advisable to consult our technical department.

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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