FloArm Top HPU 8

(Formerly known as MYK INDUFLOOR PUMF 800 (I))

8- 12 mm Heavy Duty Polyurethane Floor Topping. (HD PUR Technology with High Resistance to Aggressive Chemicals.)

MYK arment®

TECHNICAL DATA SHEET

Product Description

FloArm Top HPU 8 provides a smooth protective polyurethane resin floor finish combining outstanding wearing properties with high chemical resistance and having a matt finish. Ii 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

- 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 - extremely durable and abrasion resistant with low maintenance costs
- Resistant to a wide range of chemicals and liquids
- Seamless – easily cleaned to maintain high standards of hygiene
  - Low VOC
  - Food Grade
- Resistant to thermal shock – at 9mm thick can withstand steam cleaning regimes.

Application Methodology

Step no.1: Surface Preparation

The concrete substrate must be sound and of sufficient compressive strength (minimum 20 N/mm^2) with a minimum pull off strength of 1.5 N/mm^2. 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/mm^2).

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^{0}C dew point.

Grove 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 groves with air gun and remove all loose particles before application of primer FloArm Primer 1260.

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Step no. 2: Application of FloArm Primer 1260 as 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 8 with the substrate.

Priming for new or highly moist Concrete/Rising moisture:
FloArm Top HPU 8 is tolerant to residual substrate moisture and can be installed directly onto 7 day old concrete, or onto old good quality concrete with average moisture contents without the use of special primers provided there is a functioning DPM within the structure.
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 or moisture barrier underlays i.e., Cempo® series of products are recommended.

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

Application FloArm Top HPU 8 to be preferably done ideally during low or artificially controlled temperature.
Pre weigh Base and colorant will mix with special design mixer (slow speed Planetary double rotary)mixer first for 2 minutes tile the pigment disperse properly then add entire qty of hardener in to it and again mix it for 1 minutes. Then add entire qty of filler component and mix it for 3 to 5 minutes till the homogeneous mass is obtained temp should reached to around 33 to 35^{0}C. After Mixing immediately spread it using suitable 8mm to 10mm notch trowel on the 1day old primed concrete floor. And finish it with spike roller. As the pot life of the product is only 10 to12 minutes only, Do not re-roll later. The work area should be protected during the installation process and during the initial curing time to ensure that no airborne debris can contaminate the surface of the wet resin as this will lead to unwanted blemishes in the hardened, cured surface.

Note: If a smoother texture is required, as soon as the product has been laid and as work progresses, the surface should be gently rolled with a short nap wool blend roller in order to provide an even surface appearance.

Ensure that the covering of wet joints to be completed within the 10 minutes. Preferably select.

The product should ideally be store in an air-conditioned room a few hours before application.
The toweling span as small as so that we can cover the wet joints within the surface drying .Application (spreading and spike roller application) needs to be done very fast once mixing is over .

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 but should the floor move in any way, these defects will reflect through the system. Isolation joints will need to be allowed for in areas where high thermal movement is anticipated, e.g. around ovens and freezers.

Curing:
Normally FloArm Top HPU 8 floors can be put into service after 48 hours air curing at 30ºC temp.

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LIMITATIONS:

FloArm Top HPU 8 should only be applied at temperatures above 5°C and where the atmospheric relative humidity (RH) is 90% or below. Floors should have a RH of 75% or less. For floors with an RH of more than 75%, the entire floor area should be treated with FloArm Primer 1250 applied and seeded with Fine Aggregate, in accordance with the current product data sheet, in place of FloArm Primer 1260 Solvent Free Epoxy Primer. The substrate should have a surface tensile strength of at least1.5 N/mm². FloArm Top HPU 8 and primer FloArm Primer 1250 may be applied to substrates of a lower strength, but long-term performance may be impaired. Once the mixed material has exceeded its pot life, the viscosity and the characteristics of the product will change and any unused product should be discarded at this time.

CLEANING:
FloArm Top HPU 8 can be removed from tools and equipment by using FloArm Primer PU immediately after use. Any hardened material will need to be removed mechanically.

Specification:
The floor finish shall be FloArm Top HPU 8 installed at 8 – 12 mm in accordance with the manufacturers' instructions.

Technical Data

Samples cured for 28 days at 30^{0}C

1, Mixed Density , gm/cc	Approx. 2.10
2, Pot life @ 23 ºC	15 minutes
3, Compressive strength (IS9162-1979)	Approx. 53 N/mm² (BS6319)
4, Tensile strength (IS9162-1979)	Approx. 7 N/mm²
5, Flexural strength (IS9162-1979)	Approx. 12 N/mm²
6, Adhesive pullout bond strength in N/mm²	> 1.5 N/mm² (concrete failure)
7, Taber abrasion resistance (1000 g, 1000cycles) (ASTM D4060) weight loss, mg	CS17 wheel: 125 H22 wheel 1500
8. Shore D Hardness	75
9. Slip resistance(under BS 8204: Part 2: 2002(9),wet and dry)	Satisfactory
10 .Impact resistance (under BS 8204: Part 1: 1999)	Satisfactory
11, Water absorption	0 ml
12, Surface spread of flame (BS 476: Part 7)	Class 2
13. Foot traffic @ 30^{0}C	After 36 hrs
14. Light traffic @ 30^{0}C	After 8 hrs
15. Full traffic @ 30^{0}C	After 60 hrs
16. Full cure @ 30^{0}C	After 7 days
17.Surface resistivity(DIN EN1081)	>1 giga ohms

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Chemical Resistance:

FloArm Top HPU 8 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**
Potasium Hydroxide	25-50	**R**
Butanol		**R**
Castro oil		**R**
Citric acid	20	**R**
Hydrofluroic	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	

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.

Consumption

FloArm Top HPU 8:
8 mm application: 16.8 kg/m²
12 mm application: 25.2 kg/m²

Cleaning & Hygiene:

Regular cleaning and maintenance will enhance the life and appearance of any floor. FloArm Top HPU 8 is readily cleaned with industry standard cleaning chemicals and equipment.

Color:

FloArm Top HPU 8 is available in six standard colours: Red, Yellow, Green, black, Olive Grey and Cream.

UV Resistance:

FloArm Top HPU 8 floor systems have been formulated to provide the very highest chemical and heat 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.

Temperature resistance:

FloArm Top HPU 8 resins do not start to soften until temperatures above 130^{0}C are exceeded.
FloArm Top HPU 8 floors are fully serviceable up to 120^{0}C. Suitable for freezer temperatures down to -40^{0}C

Packaging

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

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Storage and Shelf Life

6 months from date of production in covered warehouse conditions, above 5ºC and below 25ºC 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 - 22ºC. Whilst FloArm Top HPU 8 will cure out effectively over a wide range of temperatures the optimum appearance is most readily achieved under good site conditions

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.

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.

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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