

FloArm ESF 4

(Formerly known as MYK Indufloor ESF 40)

Free Flow Epoxy underlay Screed



TECHNICAL DATA SHEET

Product Description

FloArm ESF 4 is a three component solvent free system pre-weighed for on-site mixing. The floor provides a hard wearing, Semi Smooth, impervious and easy to clean treated surface. FloArm ESF 4 can be effectively used as an underlay for subsequent finish. Being colourless allows esthetic top coats.

General: FloArm ESF 4 is a blend of epoxy resin systems and selected fillers. Each system contains 3 pre weighed materials of exact proportion for mixing and use on site. It is basically designed for quick installation in wide range of industrial environments where lasting to low maintenance floor are required. It is specially designed for higher thickness application i.e. from 4mm to 6mm.

Uses

- Laboratories
- Assembly Units
- Pharmaceutical units
- Computer assembly units
- Automobile Industry
- Chemical company
- Hospitals

Features and Benefits

- Easy to apply
- Durable: Provides a hard and abrasion resistant floor topping
- Chemical resistant: good resistant to wide range of chemicals
- Hygienic: Hygienic seamless floor which is easy to clean

Application Methodology

Step no 1: Surface Preparation:

It is essential that FloArm ESF 4 is applied on sound clean and dry surface in order that maximum bond strength is achieved between the substrate and flooring system. The laitance should be removed by grinding or grit blasting. The light laitance has to be removed by acid etching followed by thorough washing with clean water.

New Concrete:

The new concrete or cement substrate on which the system is likely to be applied should be 28 days old and have moisture content less than 4%. If moisture contents are more than 4% use MYK Arment special primers FloArm Primer 1240/1250/Cempo products. Consult the Technical Services cell of MYK Arment for product specification or guidance.

Step no.2: Priming:

The concrete surface after proper and thorough surface preparation has to be primed with FloArm Primer 1260 or 1290. 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. Depending on the ambient temperature before proceed to lay FloArm ESF 4

Step no 3: Product Mixing:

The preweighed three component pack of FloArm ESF 4 resin, hardener, & filler is to be mixed for 3 to 4 minutes with slow speed drilling machine fitted with a mixing paddle. The components should be mixed in a suitably sized mixing vessel.

Add the hardener content to the base until an even texture is obtained. Now add the filler content graded aggregate to the mix slowly and continue the mixing for about 3 to 4 minutes slowly until a completely homogeneous mix is obtained.



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Step no 4: Product Application:

The material once mixed should be used within its specified pot life; the material is poured (Before pouring, stir well mixed mass manually to avoid any settlements at the bottom) on to the primed surface and spread to the required thickness with a notched steel trowel, care should be taken not to over work the resin, spread evenly and slowly, the floor should be firmly rolled with a spiked nylon roller to help release any entrapped air in the material and help level any slight roller marks. The rolling should be carried out using a "back and forth" technique along the same path. An overlap of 50% with adjacent paths is recommended.

Technical Data

Mixed Density	Approx. 1.96 Gm/cc
Shore D hardness After 7 Days at 30°C (ASTM D 2240)	70 -80
Pot Life	Approx 20 Minutes @30°C Approx 45 Minutes @ 20°C
Compressive strength (BS 6319)	>50 N/mm ² 7 days @ 30°C
Flexural Strength (BS 6319)	>20 N/mm ² 7 days @ 30°C
Tensile Strength After 14 days (IS 9162)	>16 N/mm ² @ 30°C
Foot Traffic (ASTM C 722)	24 hours @ 30°C, 48 Hours @20°C
Vehicular traffic (ASTM C 722)	48 Hrs at 30°C
Full Cure (ASTM C 722)	7 days
Overcoat	Approx. 24 hours up to a max. 48 hours at 30°C
Chemical Resistance (ASTM C 722 spot)	7Days@30°C
Water Absorption (ASTM D 570)	Nil
Bond strength @ 7 days at +27°C (ASTM D4541-95) Concrete failure	>1.5 N/mm ²

Product Compliance

FloArm ESF 4 compliance to the standard EN 13813 SR-C50-F20-B2.0

Consumption

6.4 m² @4mm thickness for a standard pack of 50 Kgs.

Application Thickness Recommendation Minimum 4 mm

Packaging

- FloArm ESF 4 is supplied in 50 kg composite pack.

Storage and Shelf Life

12 Months if stored in cool dry place, unopened condition

Health & Safety

During mixing and application the following precautions should be observed: Ensure adequate ventilation and avoid contact to eyes, nasal passages, mouth and Avoid contact with the hands by wearing 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 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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Note

Higher temperatures shorten the pot life. Lower temperatures increase the pot life and curing time. Material consumption also increases at lower temperatures. The bond between the individual coats can be heavily impeded through the influence of dampness or contamination between the applied coats. Due to some reason, if waiting times between different coats increases or if the surface applied with liquid resin is left unattended for long time then the surface must be well cleaned and abraded before the next coat. Protect surface protective systems from moisture (e.g. rain, melt water) for approx. 4-6 hours after application. Dampness produces a white discoloration and/or stickiness on the surface and can impede the cure. Discolored and/or sticky surfaces should be taken off e.g., by abrading and renewed. Cured product residues are to be disposed of under waste disposal classification 57123 "Epoxy Resin".

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.

FloArm ESF 1

(Formerly known as MYK INDUFLOOR ESF 10)

Free Flow Epoxy Screed



TECHNICAL DATA SHEET

Product Description

FloArm ESF 1 is a three-component solvent free system pre-weighed for on-site mixing. The floor provides a hard wearing, Semi Smooth, impervious and easy to clean treated surface.

Uses

- Laboratories
- Assembly Units
- Pharmaceutical units
- Computer assembly units

Features and Benefits

- Easy to apply
- Durable: Provides a hard and abrasion resistant floor topping
- Chemical resistant: good resistant to wide range of chemicals
- Hygienic: Hygienic seamless floor which is easy to clean

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 3⁰C dew point.

Step no.2: Priming

The concrete surface after proper and thorough surface preparation has to be primed with appropriate primer (FloArm Primer 1260 or 1290). 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. Depending on the ambient temperature, application of FloArm ESF 1 can be undertaken.

Priming for Damp Concrete/Rising moisture:

Normal priming is limited to application below 4% surface moisture in concrete. If the moisture content is > 4%, use special primers FloArm Primer 1250 or moisture barrier underlays i.e., Cempo® series of products.

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TECHNICAL DATA SHEET

Step no.3 :Product Mixing:

The reweighed three component pack of FloArm ESF 1 resin, hardener, & filler is to be mixed for 3 to 4 minutes with slow speed drilling machine fitted with a mixing paddle. The components should be mixed in a suitably sized mixing vessel. Add the hardener content to the base until an even texture is obtained. Now add the filler content graded aggregate to the mix slowly and continue the mixing for about 3 to 4 minutes slowly until a completely homogeneous mix is obtained.

Step no.4 :Application:

The material once mixed should be used within its specified pot life; the material is poured (Before pouring, stir well mixed mass manually to avoid any settlements at the bottom) on to the primed surface and spread to the required thickness with a notched steel trowel (2 mm V shape) , care should be taken not to over work the resin, spread evenly and slowly, the floor should be firmly rolled with a spiked nylon roller to help release any entrapped air in the material and help level any slight roller marks. The rolling should be carried out using a "back and forth" technique along the same path. An overlap of 50% with adjacent paths is recommended.

Technical Data

Mixed Density	approx. 1.7 Gm/cc
Shore D hardness (ASTM D 2240)	70 -80
Pot Life	Approx 20 Minutes @ 35° C Approx 45 Minutes @ 20° C
Overcoat	Approx. 24 hours up to a max. 48 hours at +30° C
Foot Traffic (ASTM C722)	24 hours @ 30°C 48 Hours @20°C
Vehicular traffic (ASTM C722)	48 Hrs at 30°C
Chemical Resistance	7Days@30°C
Full Cure	7 days
Compressive strength days (IS 9162) @ 30° C	500 Kg/cm² 7 Days
Flexural Strength (IS 9162) @ 30° C	200 Kgs/cm² 7 days

Product Compliance :

FloArm ESF 1 compliance to the standard EN 13813, SR-C50-F20-B2.0

Consumption

FloArm ESF 1 covers approx. 17.5 square meter @1mm thickness for a standard pack of 30 Kgs.

Application Thickness Recommendation:

Coverage's are subject to surface conditions.
Minimum 1mm to maximum 1.5mm

Packaging

Supplied in 30 kg composite pack.

Storage and Shelf Life

12 Months if stored in cool dry place, unopened condition

Health & Safety

FloArm ESF 1 should be applied with gloves and care should be taken to see that it does not fall on skin or eyes. Splashes on to eyes have to be immediately washed with plenty of clean water and medical advice has to be taken.

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Product Categories Available



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FloArm ESF 2

(Formerly known as MYK Indufloor ESF)

Free Flow Epoxy underlay Screed



TECHNICAL DATA SHEET

Product Description

FloArm ESF 2 is a three-component solvent free system pre-weighed for on-site mixing. The floor provides a hard wearing, Semi Smooth, impervious and easy to clean treated surface.

Uses

- Laboratories
- Assembly Units
- Pharmaceutical units
- Computer assembly units
- Automobile Industry
- Chemical company
- Hospitals

Features and Benefits

- Easy to apply
- Durable: Provides a hard and abrasion resistant floor topping
- Chemical resistant: good resistant to wide range of chemicals
- Hygienic: Hygienic seamless floor which is easy to clean

Application Methodology

Step no 1: Surface Preparation:

It is essential that FloArm ESF 2 is applied on sound clean and dry surface in order that maximum bond strength is achieved between the substrate and flooring system. The laitance should be removed by grinding or grit blasting. The light laitance has to be removed by acid etching followed by thorough washing with clean water.

New Concrete:

The new concrete or cement substrate on which the system is likely to be applied should be 28 days old and have moisture content less than 4%. If moisture contents are more than 4% use MYK Arment special primers FloArm Primer 1240/1250/Cempo products. Consult the Technical Services cell of MYK Arment for product specification or guidance.

Step no.2: Priming:

The concrete surface after proper and thorough surface preparation has to be primed with FloArm Primer 1260 or 1290. 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. Depending on the ambient temperature before proceed to lay FloArm ESF 2

Step no 3: Product Mixing:

The preweighed three component pack of FloArm ESF 2 resin, hardener, & filler is to be mixed for 3 to 4 minutes with slow speed drilling machine fitted with a mixing paddle. The components should be mixed in a suitably sized mixing vessel.

Add the hardener content to the base until an even texture is obtained. Now add the filler content graded aggregate to the mix slowly and continue the mixing for about 3 to 4 minutes slowly until a completely homogeneous mix is obtained.



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Step no 4: Product Application:

The material once mixed should be used within its specified pot life; the material is poured (Before pouring, stir well mixed mass manually to avoid any settlements at the bottom) on to the primed surface and spread to the required thickness with a notched steel trowel, care should be taken not to over work the resin, spread evenly and slowly, the floor should be firmly rolled with a spiked nylon roller to help release any entrapped air in the material and help level any slight roller marks. The rolling should be carried out using a "back and forth" technique along the same path. An overlap of 50% with adjacent paths is recommended.

Technical Data

Mixed Density	Approx. 1.8 Gm/cc
Shore D hardness After 7 Days at 30°C (ASTM D 2240)	70 -80
Pot Life	Approx 20 Minutes @35°C Approx 45 Minutes @ 20°C
Compressive strength (BS 6319)	>50 N/mm ² 7 days @ 30°C
Flexural Strength (BS 6319)	>20 N/mm ² 7 days @ 30°C
Tensile Strength After 14 days (IS 9162)	>16 N/mm ² @ 30°C
Foot Traffic (ASTM C 722)	24 hours @ 30°C, 48 Hours @20°C
Vehicular traffic (ASTM C 722)	48 Hrs at 30°C
Full Cure (ASTM C 722)	7 days
Overcoat	Approx. 24 hours up to a max. 48 hours at 30°C
Chemical Resistance (ASTM C 722 spot)	7Days@30°C
Water Absorption (ASTM D 570)	Nil
Bond strength @ 7 days at +27°C (ASTM D4541-95)	>1.5 N/mm ² or Concrete failure

Product Compliance

FloArm ESF 2 compliance to the standard EN 13813 SR-C55-F20-B1.5

Consumption

FloArm ESF 2 covers approx. 10.1 square meter @2mm thickness for a standard pack of 37 Kgs. Coverage's are subject to surface conditions.

Application Thickness Recommendation Minimum 2 mm to maximum 3 mm

Packaging

- FloArm ESF 2 is supplied in 37 kg composite pack.

Storage and Shelf Life

12 Months if stored in cool dry place, unopened condition

Health & Safety

During mixing and application the following precautions should be observed: Ensure adequate ventilation and avoid contact to eyes, nasal passages, mouth and Avoid contact with the hands by wearing 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 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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Note

Higher temperatures shorten the pot life. Lower temperatures increase the pot life and curing time. Material consumption also increases at lower temperatures. The bond between the individual coats can be heavily impeded through the influence of dampness or contamination between the applied coats. Due to some reason, if waiting times between different coats increases or if the surface applied with liquid resin is left unattended for long time then the surface must be well cleaned and abraded before the next coat. Protect surface protective systems from moisture (e.g. rain, melt water) for approx. 4-6 hours after application. Dampness produces a white discoloration and/or stickiness on the surface and can impede the cure. Discolored and/or sticky surfaces should be taken off e.g., by abrading and renewed. Cured product residues are to be disposed of under waste disposal classification 57123 "Epoxy Resin".

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