

APCOFLOR PU SCREED FG

FLOORING COMPOUND

Flow-applied, heavy duty polyurethane screed.

PRODUCT DESCRIPTION

Apcoflor PU Screed FG is a heavy-duty, 4-6mm, HACCP-certified polyurethane floor screed with exceptional durability. This resin-rich solution resists a wide range of chemicals and temperatures, from -5°C to 120°C. It is rapidly installed via notched trowel or squeegee, providing a slightly mat finish ideal for wet and dry areas. Incorporating an antimicrobial agent, this dense, impervious, and impact-resistant flooring is perfect for demanding food, chemical, and pharmaceutical industries.

KEY FEATURES

- **High Temperature Resistance:** Withstands hot water and steam exposure, maintaining performance in demanding thermal conditions.
- **Heavy-Duty Durability:** Extremely hard-wearing formulation designed to endure rigorous industrial traffic and mechanical stress.
- **Slip-Resistant Finish:** Provides a textured, slip-resistant surface ensuring safe movement in wet or hygiene-critical areas.
- **Hygienic Protection:** Includes antimicrobial agents that minimize microbial growth and support strict hygiene environments.

PRODUCT BENEFITS



Chemical Resistance



Heavy Duty



Slip Safe



Semi-Matt Finish

PACKAGING

20kg

TECHNICAL PROPERTIES

Properties	Value
Colours	Red, Yellow, Green, Orange, Grey, Cream, Blue and Brown
Substrates	Concrete, polymer modified screed, granolithic concrete
Theoretical coverage	<p>Apcoflor PU Screed FG (primer/scratch coat): Coverage appropriate to texture and porosity of floor</p> <p>Apcoflor PU Screed FG (floor topping): 3.5 m²/pack at 3 mm 2.5 m²/pack at 4 mm 1.7 m²/pack at 6 mm</p>
Strength (BS 8204-6) (3mm) (BS 8204-6) (4-6mm)	Type 5 Floor (medium duty) Type 7 Floor (heavy duty)
Compressive strength (ASTMC109, BS6319-2)	45 MPa in 7 days 49 MPa in 28 days
Tensile strength (BS6319-7)	5.5 MPa in 7 days 6.6 MPa in 28 days
Flexural strength (BS6319-3)	8.6 MPa in 7 days 9.9 MPa in 28 days
Density (ASTM D 792)	1650 kg/L
Modulus of elasticity (ASTM C 597)	6700 MPa

Properties	Value
Flexural modulus (ASTM C 580)	4593N/mm ²
Taber abrasion resistance (ASTM D 4060)	CS17 wheel 80 mg/1000 cycles
Mass applied 1000g	
Taber abrasion resistance (ASTM D 4060)	H22 wheel 150mg/1000 cycles
Mass applied 1000g	H22 wheel 170 mg/1000 cycles
Water absorption (ASTM C 413)	0.2%
Impact strength (ASTM D 2794)	1.31 kg-m, no failure
Thermal conductivity (ASTM C 518-2018)	0.24 W/m.K
Cleanability	Pass
Non-taint property (IS-8639, 24 hours)	Pass
Ideal application temperature range (°C)	15-30 (For Higher emperature follow hot climate precautions)
VOC (BS EN ISO 11890-1 : 2007)	<1

THICKNESS AND HEAT RESISTANCE

Application thickness 4-6 mm:

Thickness	Serviceable Resistance
4 mm	-5°C to +80°C
5 mm	-20°C to +95°C
6 mm	-20°C to +120°C

STEAM RESISTANCE

- **Designed for Hygiene:** The resins are specifically engineered to meet the stringent hygiene and sanitation requirements of the food processing industry, helping prevent food contamination.
- **Compatibility with Steam Cleaning:** The screed is compatible with steam cleaners, allowing for the effective removal of challenging deposits like grease, oil, and molasses.
- **Disinfection Without Chemicals:** Steam cleaning on the surface effectively eliminates bacteria, mold, germs, and viruses without the need to rely on harsh chemical cleaning products.
- **High Temperature Tolerance:** The product offers exceptional durability, withstanding steam temperatures exceeding 120°C.

CHEMICAL RESISTANCE

Apcoflor PU Screed FG is resistant to a wide range of commonly used chemicals in the food, dairy and pharmaceutical industries, aircraft hangars and engineering workshops.

Temperature@25°C (ASTM D 1308) - 24 Hours Exposure

Chemical	Result	Chemical	Result
Hydrochloric acid solution (10%)	R	Lactic acid	R
Sulphuric acid solution (20%)	R	Lime Juice	R
Ethylene Glycol	R	Milk	R
Acetone	R	Phosphoric acid (50%)	R
Brake fluid	R	Skyrol	R
Castor Oil	R	Sodium Bicarbonate (saturated)	R

Chemical	Result	Chemical	Result
Coconut Oil	R	Sodium Hydroxide (50%)	R
Diesel oil	R	Vegetable Oil	R
Ethanol	R	White Spirit	R
IsoPropanol	R	Xylene	R
Kerosene	R	Olive Oil	R

R: Resistant, no sign of changing color, cracking, blistering and disintegration were observed.

THERMAL SHOCK RESISTANCE

Apcoflor PU Screed FG, when applied at a thickness of 6mm, offers excellent resistance to thermal shock. It performs effectively by withstanding gradual temperature changes in the flooring, reducing the risk of failure caused by thermal cycling. To ensure optimal performance, it is essential to follow good housekeeping practices. For further guidance, please consult Asian Paints Berger technical services department. To minimize the likelihood of condensation or surface blooming at the time of application, the substrate temperature must remain at least 3°C above the dew point during priming and for up to 48 hours after the application of Apcoflor PU Screed FG.

CURING SCHEDULE AT 30°C

Working life of full packs

Apcoflor PU Screed FG	15-20 minutes
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Note: Usable working life of material following mixing and immediate spreading as per the application instruction

Finished floor

Cure time to light pedestrian traffic	12 hours
Cure time to light	24 hours

Cure time to	48 hours
Cure time to	7 days
Full chemical resistance	7 days

Note: the above cure times are approximate and given as a guide only. These times can vary due to prevailing site conditions and temperature.

APPLICATION AREAS

- Ideal to use in abattoirs and meat processing plants, printing factories and chocolate confections factory.
- Food processing units requiring high hygiene and thermal shock resistance.
- Beverage and brewery facilities with frequent hot water and chemical exposure.
- Pharmaceutical and chemical plants needing durable, chemical-resistant flooring.
- Heavy-duty industrial zones with continuous mechanical load and vehicle movement.
- Commercial kitchens and dairies demanding slip-resistant, hygienic, and easy-clean surfaces.

APPLICATION METHOD

1. Surface Preparation:

- Professional Application and Substrate Condition: Apcoflor PU Screed FG must be applied by a qualified professional. The substrate must be clean, dry, and free of contaminants, and all stipulated mixing/application guidelines and appropriate safety measures must be ensured.
- Groove Cutting and Debris Removal: Adequate surface preparation is essential. Cut grooves to a minimum depth and width of twice the flooring thickness at edges, day joints, drains, up-stands, doorways, and across the floor at regular intervals. Ensure all debris is thoroughly removed.
- Installation: The following information is a guideline for the installation of the Apcoflor PU Screed FG urethane self-smoothing system. Contact the Asian Paints Technical Service Department for assistance before application.

- Avoid returning to spike roll previously applied areas as the product sets quickly, which may leave marks on the surface.
- Protect the finished floor from other trades using Kraft paper or similar breathable materials. Do not use polythene. Ensure the installed floor is protected from damp, condensation, and water for at least 4 days.

4. Clean Up:

- **Regular Cleaning is Essential:** Regular cleaning is crucial to maintaining and enhancing the floor's life expectancy, overall appearance, and crucial slip resistance over time.
- **Use Standard Industrial Methods:** The floor can be cleaned effectively using standard industrial cleaning chemicals and techniques typically employed in demanding environments.
- **Consult Chemical Supplier:** For specific guidance on the best cleaning products and procedures for your operations, it is essential to consult your chemical cleaning supplier.

PRODUCT LIMITATIONS

- The substrate must be structurally sound and free from any foreign matter that may inhibit adhesion.
- Do not apply at temperatures below 10°C or above 27°C, or when relative humidity exceeds 80%.
- Avoid application if the surface temperature is less than 5°C below the dew point or if the substrate/ambient temperature is below 10°C during application or within the tack-free period.
- Protect material from freezing prior to installation.
- Material should be stored at room temperature prior to application.
- Do not feather edge during application.
- Do not mix partial units or hand mix.
- Mixed material should not sit in a bucket for more than 3 minutes, as this will reduce the working time.
- Do not apply to cracked or unsound substrates.

- If encountering concrete outgassing during installation, discontinue application and contact the Technical Service Department.
- Allow Apcoflor PU Screed FG to cure for a minimum of 12 hours before applying a topcoat.
- If using Apcoflor materials for patching, sloping, or filling joints, allow the repair material to cure for at least 8 hours before covering with subsequent layers.
- For outdoor applications, consult the Technical Service Department.
- Full chemical resistance is achieved after a 7-day cure period. For specific chemical resistance details, contact the Technical Service Department.
- Note that color variations between batches may occur due to the manufacturing process.
- Slip resistance may diminish over time due to wear, poor maintenance, or surface contamination.

ADDITIONAL NOTES

- Apcoflor PU Screed FG is manufactured in batches. While efforts are made to ensure consistency, slight variations between batches are inherent to the process. These variations are carefully monitored to remain within acceptable limits.
- Good housekeeping practices are recommended.
- The product is not colorfast and may yellow over time due to UV exposure. This discoloration is more noticeable in lighter colors and blue shades but does not affect the product's performance or chemical resistance.
- Some staining or discoloration may occur when exposed to certain chemicals, depending on factors such as dwell time, temperature, chemical type, and housekeeping practices. This does not necessarily compromise the product's service integrity or durability.

STORAGE CONDITIONS

Store the product in a dry, shaded area, protected from direct sunlight, and maintain storage temperatures between 15°C and 30°C. Ensure aggregates are kept completely dry to avoid moisture contamination that may impact performance.

SHELF LIFE

APCOFLOR PU Screed FG offers a 12-month shelf life (and 6 months for the filler component) when stored off the ground in a dry area maintained between 10°C and 30°C. Exposure to temperatures outside this range - or repeated fluctuations - can shorten its storage life. Protect the material from frost.

SAFETY PRECAUTIONS

- Always wear protective gloves, goggles, and clothing during mixing and application to prevent skin or eye irritation.
- Avoid direct contact with skin or eyes; in case of contact, wash the affected area with plenty of clean water.
- If inhaled, move the affected person to fresh air immediately and seek medical advice if discomfort persists.
- Ensure proper ventilation at the site of application to avoid inhalation of fumes.

- Keep away from heat, sparks, and open flames. Do not smoke during handling.

CERTIFICATIONS

Apcoflor PU Screed FG complies with HACCAP, BS8204-6, ASTM C 109, BS6319-2, BS6319-7, BS6319-3, ASTM D 792, ASTM C 597, ASTM C 580, ASTM D 4060, ASTM C 413, ASTM D 2794, ASTM C 518-2018, IS-8639, and BS EN ISO 11890-1 : 2007.

DISCLAIMER

The information provided in this Technical Data Sheet is based on laboratory tests, industry practices, and practical application experience. However, actual site conditions may vary and are beyond the manufacturer's control. Asian Paints makes no warranties, expressed or implied, and shall not be liable for any loss or damage resulting from improper usage, handling, or non-compliance with the recommended guidelines. Users are advised to test the product for suitability before full-scale application.

Installation

The following information is a guideline for the installation of the Apcoflor PU Screed FG urethane self-smoothing system. Contact Asian Paints Berger Technical Service Department for assistance prior to application.

Other Surfaces

Apcoflor PU-Screed FG systems can be applied to a variety of substrates if the substrate is properly prepared. Preparation of surfaces other than concrete will depend on the type of substrate, such as wood, concrete block, quarry tile, etc. Should there be any questions regarding a specific substrate or condition, please contact the Technical Service Department prior to starting the project.

Surface Preparation – Concrete

Concrete surfaces shall be abrasive blasted to remove all surface contaminants and laitance. The prepared concrete shall have a surface profile equal to CSP 4-6. Consult the Technical Service Department if oil or grease is present. After initial preparation has occurred, inspect the concrete for bug holes, voids, and other imperfections.

Protrusions shall be ground smooth while voids shall be filled with a system filler. For recommendations, consult the Technical Service Department.

New Concrete Floors

The base concrete should meet a minimum grade of RC30 as per BS 8500-2:2002 and must not contain any water-repellent admixtures. Surface strength should be assessed using a rebound hammer, achieving a minimum of 25, or the surface tensile strength should exceed 1.5 MPa. Laitance, surface sealers, or curing membranes

must be removed mechanically through shot blasting or diamond grinding to expose coarse aggregates. After preparation, remove all loose debris and dirt using Vacuum cleaning. For slabs on grid, ensure a damp-proof membrane is incorporated into the slab design in accordance with CP102 (Code of Practice for the Protection of Buildings Against Water from the Ground).

Old Concrete Floors

All existing coatings, laitance, and surface contaminants must be removed mechanically (e.g., shot blasting or diamond grinding) to expose coarse aggregates. After preparation, remove loose debris and dirt using an industrial vacuum cleaner. Heavy oil or grease deposits should be removed mechanically, by steam cleaning, or through biological treatment. Perform a close visual inspection to verify cleanliness and soundness. Repair any weak or suspect areas as needed.

2. Priming:

- Apply Apcoflor PU-Screed FG as a primer/scratch coat at a nominal thickness of 1 mm. The actual coverage rate depends on the surface texture and porosity of the concrete. Mix the product (refer to "Application" below) and spread evenly using a trowel. Allow the scratch coat to cure for 12–48 hours before applying Apcoflor PU Screed FG. If the scratch coat cures for more than 48 hours, abrade the surface thoroughly and re-apply a fresh coat.
- In case of pin-holing occurs in the cured scratch coat, indicating air rising from the substrate, contact your local Asian Paints Berger office for advice. Failure to address this may increase the risk of pin-holing in the surface topping.

3. Application:

- Apcoflor PU Screed FG is a four-component product. Use a forced-action rotary paddle mixer for mixing.
- Agitate the base component for 30 seconds before use.
- Pour the liquid base and hardener components and the color pack into a large plastic container and mix briefly. Add the filler component while mixing, then continue mixing for at least 3 minutes until lump free mix is achieved. Scrap the sides of the container.
- Spread the mix immediately over the prepared area using a notched trowel to achieve the required thickness.
- De-aerate using a spiked roller within 10 minutes of application to avoid affecting the surface finish. Ensure anchorage grooves are fully wetted with the material.