



UQESH® PF

Thin Waterborne Polyurethane Self-leveling Mortar Flooring System

UQESH® PF is a waterborne polyurethane flooring system with excellent resistance to aggressive chemicals and light load at 2-3mm thickness.

DESCRIPTION

UQESH® PF provides a smooth, even, monolithic, protective floor finish suitable for application in dry environments. For Matt finish, UQESH® PF-M is used, and for glossy finishes, UQESH® PF-B is used. No separate finish is required. It is dense and environmental friendly providing the ideal floor finish for food, pharmaceutical, manufacturing industries, and wherever a durable floor is required, including clean rooms, laboratories, packing halls, garages and warehouses.

PERFORMANCE DATA

1. Waterborne, odorless, free of heavy metals, conform to the requirements of the national food safety system.
2. Smooth and dense surface, aesthetic appearance, slip resistance, anti-bacterial, bacteriostatic, easy to clean and easy to maintain.
3. With high mechanical strengths and a low elastic modulus, UQESH® PF is very resilient and will not result in cracking or delamination when subjected to impact, deformation, and scratch.
4. Resistant to a wide range of chemical aggressors, including organic acids, alkali, amines, hydrochloric and solvents. Note: Some chemicals, though not affecting the performance of UQESH, may result in staining or discoloration on the floor, depending on the spillage and the state of housekeeping. For detailed information about chemical resistance data, please contact the UQESH Technical Department for guidance.
5. UQESH® PF-M & PF-B is integrated, representative of no need of separate finish for a matt or glossy surface.
5. 2-3mm of UQESH® PF, thin self-leveling mortar, short curing time, rapid construction period.
6. UQESH® PF floor is completely able to serve at the temperatures up to 60°C.

TYPICAL PERFORMANCE PARAMETERS

No.	Item	Specification	Reference standard
1	7d Compressive Strength/MPa \geq	40	GB/T 17671-1999
2	7d Flexural Strength/MPa \geq	10	GB/T 17671-1999
3	7d Tensile strength/MPa \geq	2.0	GB/T 22374-2008
4	Slip Resistance (Dry Friction Coefficient) \geq	0.5	GB/T 4100-2006
5	Abrasion Resistance (CS 17 750g/500r) /g \leq	0.060	GB/T 1768-2008
6	Impact Resistance	1kg, 100cm no cracking, no peeling	GB/T 22374-2008
7	Volatile Organic Compound (VOC) ,g/L	≤ 10	GB/T 22374-2008
8	Free formaldehyde, g/kg	≤ 0.1	GB/T 22374-2008
9	Benzene, g/kg	≤ 0.1	GB/T 22374-2008
10	Toluene and xylene, g/kg	≤ 10	GB/T 22374-2008
11	Free Toluene Diisocyanate (TDI) , g/kg	≤ 2	GB/T 22374-2008
12	Pb, mg/kg	≤ 30	GB/T 22374-2008
13	Cb, mg/kg	≤ 30	GB/T 22374-2008
14	Cr, mg/kg	≤ 30	GB/T 22374-2008
15	Hg, mg/kg	≤ 10	GB/T 22374-2008

PACKAGING & MATCHING RATIO

16.0 kg per set, containing 2.5kg/bag of Part A, 2.8kg/bag of Part B, 10.2kg/bag of Part C, and 0.5kg/bag of Part D. A: B: C: D=2.5: 2.8: 10.2: 0.5. Mix all parts of packages according to the packaging specification for use.



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COLORS

UQESH® PF provides a wide range of colors according to RAL. Please contact the UQESH Technology Department to determine the specific colors.

UQESH Flooring Systems have been identified to provide the best physical and chemical properties. UV exposure and scatter, though not affecting the performance of UQESH® PF, may result in yellowing of the floor.

TECHNICAL SPECIFICATION

UQESH® PF should be constructed at a thickness of 2-3 mm according to the manufacturer's instructions. Application System: UQESH® IF Sealing Primer + UQESH® PF Top Coating. Manufacturer: UQESH ADVANCED MATERIALS TECHNOLOGY (SHANGHAI) CO., LTD.

SUBSTRATE QUALITY

The concrete substrate should be visibly dry and have a tested moisture content of less than 8%, and a minimum tensile strength of 2MPa.

Please refer to the guide "The Design and Preparation of UQESH Industrial Flooring".

CONSUMPTION RATE

2mm: UQESH® IF 1.9-2.0kg/m² 1mm + UQESH® PF 1.9-2.0kg/m² 1mm

3mm: UQESH® IF 2.85-3.0kg/m² 1.5mm + UQESH® PF 2.85-3.0kg/m² 1.5mm

CURING

Usually, the UQESH® PF floor can be put into use in 24 hours. If there is friction subject to heavy objects, machine movements, it is recommended to cover a protective material (such as plastic/leatheroid) on the surface, otherwise, it may cause damage to the floor, resulting in the difficulties of removing the stains, scratches, etc.. If it is not urgent, it is advised to put it into use after curing for 168 hours under a standard environment.

SHELF LIFE

Stored in a dry, shady, cool and well-ventilated place at 5~35 °C in well-closed containers, avoiding high temperatures and fire sources. During transportation, materials should be placed stably, and the carriage should be kept dry and closed, protected from moisture, frost, sunshine, and rainfalls. Parts A and Parts B must be protected from frost.

Parts A & Parts D have a shelf life of 360 days from the date of production with originally sealed packaging, stored under the standard storage conditions.

Parts B & Parts C have a shelf life of 180 days from the date of production with originally sealed packaging, stored under the standard storage conditions.

EXECUTION CONDITIONS

For the best finish result of the material, the temperature of the substrate and atmosphere should be between 20 to 24 °C and the relative humidity should be 50%. The humidity will affect the finished result if UQESH® PF is cured beyond a certain temperature. It is easy to get a good surface under good construction and environment conditions. For specific construction requirements, please refer to the construction process of UQESH® PF.

HEALTH & SAFETY

For detailed safety and health information of UQESH® PF, please refer to the Material Safety Data Sheet (MSDS).

The following general rules apply to all products of UQESH:

As with all chemicals, contact with eyes, mouth, skin, and food is strictly prohibited during transportation, storage, and construction (it may be contaminated with water vapor before fully cured and dry). In case of contact with eyes or skin, treat immediately. If swallowed, seek medical advice immediately. Keep this product out of the reach of children and animals. Do not place it at will. Safety signs are required.



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ATTENTION

Operate in a ventilated environment to avoid inhaling the odor. Wear protective masks during construction to avoid aspiration such as raising dust while mixing the materials. It may cause eyes and skin irritation, so please wear safety gloves and goggles during operation. Do not smoke during construction or in storage areas, and keep this product away from open fires.

STATEMENT

The information provided in this UQESH publication is based on the present state of our laboratories and practices. However, due to the limitations of our knowledge, and the uncontrollable of the operation, we only guarantee the quality of products. We reserve the right to amend the specification at any time without prior notice. Please contact UQESH for the latest version of this product specification.