



UQESH ADVANCED MATERIALS TECHNOLOGY (SHANGHAI) CO., LTD.

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UQESH®

Food grade
Waterborne
Polyurethane
System

Sustainable quality assurance from Japan



Eco materials from a drop of castor oil



Company Brief

UQESH Advanced Material Technology (Shanghai) Co., Ltd. is a Sino-Japanese joint venture. Based on the advanced castor oil polyurethane technology from Japan, UQESH developed a series of environmentally friendly advanced polyurethane materials.

With its excellent performance, the water-based polyurethane floor and mildew-proof wall system from UQESH has become the appointed brand of a large number of world-famous food and pharmaceutical companies. We provide long-term cleaning solutions for beer and beverages, dairy products, refrigerated meat, cooked food, baked bread, prepared food central kitchens, medicine and other industries. Meanwhile, UQESH provides sustainable wear-resistant and durable ground systems for Industry 4.0, and serves a series of precision manufacturing industries such as aviation industry, high-speed rail, and Apple supply chain. More than one million square meters of high-quality polyurethane floor/wall systems have been applied in above industries.

UQESH always keeps mindset of environmental protection and safety. And we already got HACCP food safety production system certification, GMP standard certification, and ISO14001/9001 certification in the industry; our products have passed the French Indoor Environment Testing A+ certification, food non-toxic contact certification, and LEED product certification, which provide a clean and stable production environment for the safe production of food and drugs.

Innovation, Eco, Reliable



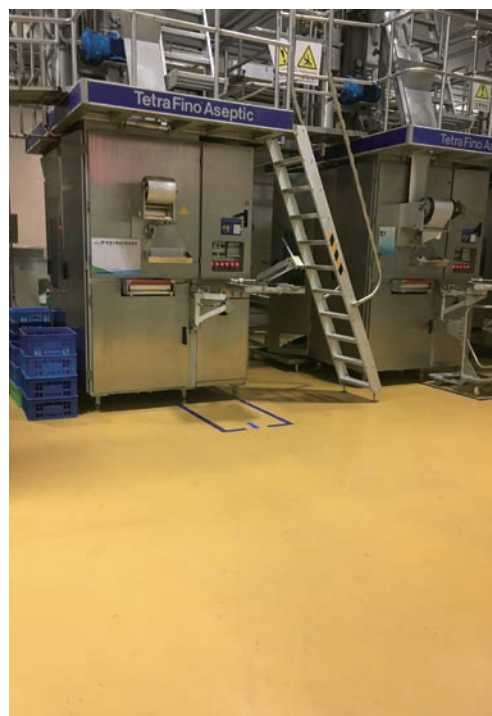
Product Portfolio

1	UQESH® IF	Self-leveling standard water-based polyurethane mortar system	4~6mm
2	UQESH® PF	Self-leveling thin-coating water-based polyurethane mortar system	2~3mm
	UQESH®PF-M	Matte Type	
	UQESH®PF-B	Bright Type	
3	UQESH® SF	Heavy-duty non-slip waterborne polyurethane mortar system	6~12mm
	UQESH® SF-1	Mild non-slip water-based polyurethane mortar system	4~8mm
4	UQESH® & UFlex® Super wear-resistant roller top coating system		
4.1	UQESH® HEFloor	Waterborne polyurethane roller top coating	0.1~0.15mm
	HEFloor-S	Cellulite effect	
	HEFloor-V	Frosted effect	
4.2	UFlex® HF-V	Solvent-free ultra-abrasive polyurethane top coating	0.1~0.15mm
	UFlex® TP100	Solvent-free transparent top coating system	0.1~2mm
	UFlex® TP325S	Solvent-free high wear-resistant top coating (Cellulite effect)	0.1~1mm
	UFlex® TP325V	Solvent-free high wear-resistant top coating (Frosted effect)	0.1~0.15mm
5	UFlex® Efficient anti-mold wall system		
	UFlex® PROTOR CL30	Sterilization & clear mold solution	
	UFlex® PROTOR INTERA	Composite water-based sealing interface agent	
	UFlex® METOP Kitt01	Putty for wall sealing	
	UFlex® METOP Kitt719	Putty for Wall reinforcement	
	UFlex® METOP Ober609	Water-based mildew-proof cleaning top coating	
	UFlex® METOP Ober701	Water-based mildew-proof matte top coating	
6	UQESH® MCF/PUF	Waterborne polyurethane colored sand self-leveling / floating colored sand system	3~7mm
7	UQESH® IF-EC	Anti-static water-based polyurethane mortar self-leveling system	4~7mm
8	UQESH® HEFloor-A	Non-pyrophoric water-based polyurethane composite floor system	4~7mm
9	UQESH® CR	Waterborne polyurethane mortar for vertical arc surface	Vertical height can be up to 30cm
10	UFlex® E200	Polyurethane caulking	

UQESH® IF

Self-leveling standard water-based polyurethane mortar system

4~6mm



Characteristics

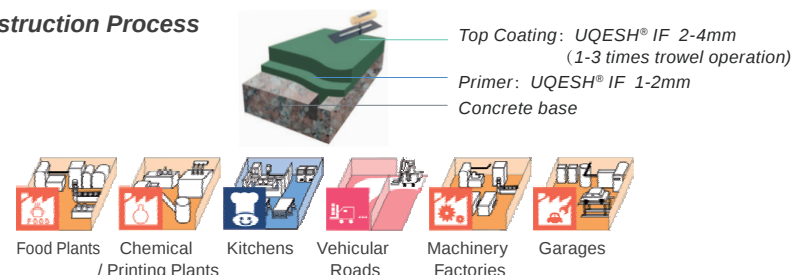
- 4-6mm Self-leveling
- Monolithic, seamless, smooth, matte
- Durable
- Curing rapidly & short construction period
- Abrasion resistance
- -20℃~60℃ for frequent use and steam washing occasionally for a short time
- Chemicals resistance

Recommend Application

- The ground of food factories, kitchens, etc. which exposed to hot water, grease, and syrup.
- The maintenance or warehouse floor which use for forklift operation or heavy lifting and easy to produce oil.
- Resistance to common acid and alkali corrosion.
- Wherever required long-term resistance to high temperatures and heavy load.

Applications Budweiser InBev, Tsingtao Beer, New Hope Dairy, Fujiya Co., Zhou Heiya, Swire Coca-Cola, Amway Guangzhou, etc

Construction Process



UQESH® PF

PF-M Matte Type PF-B Bright Type

Self-leveling thin-coating water-based polyurethane mortar system

2~3mm



Characteristics

- 2-3mm Self-leveling
- Smooth surface & easy to clean
- Monolithic, seamless
- Curing rapidly & short construction period
- Chemicals resistance
- -10℃~50℃ for frequent use and steam washing occasionally for a short time

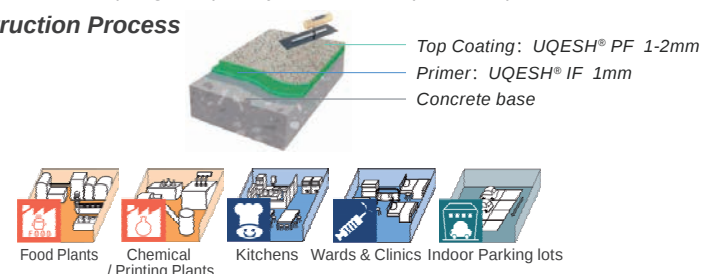
Recommend Application

The smooth surface of PF-B is denser, suitable for application in wherever an extremely clean floor is required.

Production and packaging areas of the dairy industry and baking industry, filling areas of beer and beverage, laboratories, cosmetics workshops, underground garages, electronic components production and assembly, tobacco industries, etc.

Applications Dali Group (short cleaning production area), Tsingtao Beer (filling area), Yanjin Snacks Shop, BIEL Optics, etc

Construction Process



UQESH® SF UQESH® SF-1

Heavy-duty non-slip waterborne polyurethane mortar

6~12mm

Mild non-slip water-based polyurethane mortar

4~8mm

UQESH® SF (6-12mm) suitable for -40℃~130℃ for frequent use and steam washing occasionally for a short time
UQESH® SF-1(4-8mm) suitable for -30℃~80℃ for frequent use and steam washing occasionally for a short time

Characteristics

- High temperature resistance
- Special anti-slip surface
- Durable
- Curing rapidly
- Resistance to heavy load
- Excellent resistance to heavy impact

Recommend Application

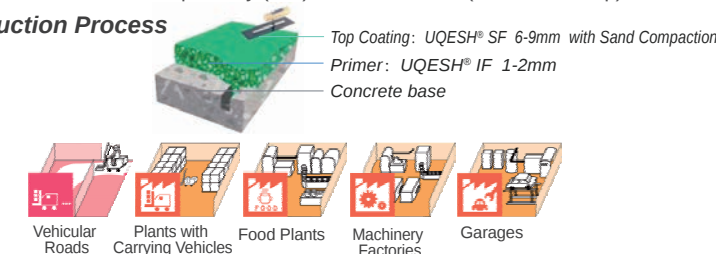
Antiskid grade R10-R11 (DIN51130) is suitable for high temperature and high heat areas.

- SF is suitable for wherever requiring resistant to high temperatures such as cooked food plants, Brining and cooking workshops of central kitchens, extraction and concentration workshops of traditional Chinese medicine plants, and hot steam washing areas;

- Sf-1 is mild anti-slip, suitable for frequent rinsing areas such as slaughtering, mixing workshops, refrigerations, dairy pretreatment workshops.

Applications Zhou Heiya, Xiaohu Duck, Shanghai Riyan (concentration workshop), New Hope Dairy (CIP), Wens Food Co. (brine workshop)

Construction Process



Super wear-resistant roller top coating system

UQESH® HEFloor

Waterborne polyurethane roller top coating

0.1~0.15mm

HEFloor-S Cellulite effect

HEFloor-V Frosted effect

Characteristics

- Smooth surface with luster & aesthetics
- Water-based and environment-friendly
- Substrate moisture tolerance
- Strong Hardness (Mitsubishi Pencil 24H)
- Excellent resistant to aggressive chemicals
- Short construction period

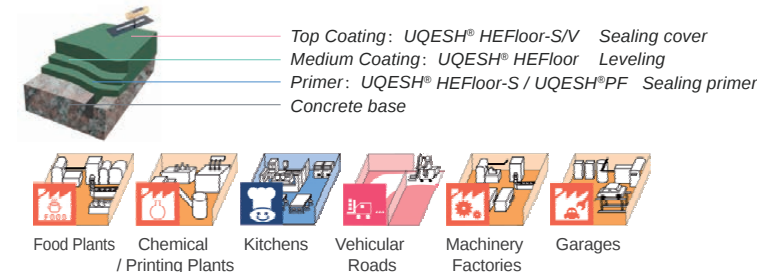
Recommend Application

Garages, machine rooms, power distribution rooms, clean vegetable areas, post treatment workshops (non hot areas) of food factories, maintenance workshops

Applications

Dali group (beverage workshop), Jinyuanhong Catering Group (clean vegetable line)

Construction Process



Super wear-resistant roller top coating system

UFlex® Solvent-free ultra-abrasive polyurethane top coating

2~3mm



HF-V Frosted effect
TP100 Transparent top coating

TP325S Cellulite effect
TP325V Frosted effect

Characteristics

- Solvent-Free, Eco
- Thin-layer roller coating
- Anti-UV, Anti-aging
- Easy to clean
- Excellent chemical tolerance
- Scratching tolerance

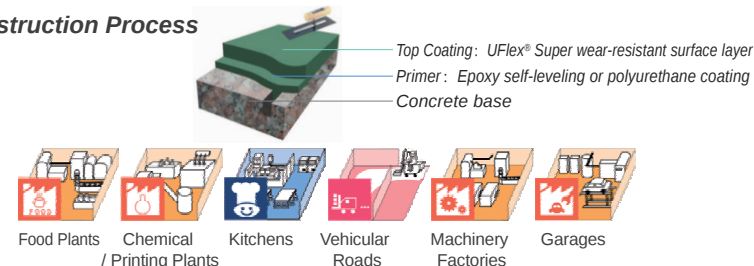
Recommend Application

Applied to epoxy self-leveling or polyurethane floor surface layer to enhance wear resistance and scratch resistance, easy to clean and leave no stains. Suitable for clean production areas, especially for areas with high requirements for wear-resistance, easy cleaning and durability.

Applications

FAW Hongqi, CRRC Sifang Locomotive, TSINGTAO BREWERY, Anheuser-Busch InBev, Mengniu Dairy, QiaQia Food, China National Salt Industry Group Co. Ltd, Jincheng Medical, Granda Technology Development Co. Ltd.

Construction Process



Thin Coating Waterborne Polyurethane System Combination

0.5~2mm



Characteristics

- Easy to clean
- Cellulite & Frosted effect
- Scratch resistant, seamless
- Chemical resistance to acidic or caustic cleaners
- Resistance to moisture
- Fast curing, short construction time

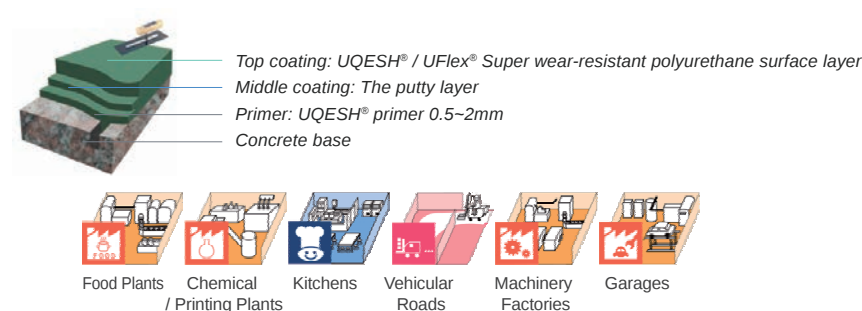
Recommend Application

Production and packaging areas for in dairy and baking industries, clean workshops, filling areas for beer and beverages

Applications

Darley group (Clean production area for short shelf-life bread), filling areas for TSINGTAO BREWERY, BIEL Crystal, Fuji Electronic Technology Co., LTD, Zhongding Group, Unilever, Shenzhen Grand Theatre (underground parking)

Construction Process



UFlex® Efficient anti-mold wall system

UFlex® PROTOR CL30 Sterilization & clear mold solution

Characteristics

- Strong permeability
- Broad - spectrum antibacterial, efficient
- Efficient anti-mold

Recommend Application

Concrete, cement wall old and new, old moldy wall; Wall renovation: sterilization and mildew removal treatment, eg: Food OEM factory, Chemical drug factory, Shopping mall, Kitchen etc

UFlex® PROTOR INTERA Composite water-based sealing interface agent

Characteristics

- Strong reinforcement
- Water resistance and mold resistance
- Strong adhesion

Recommend Application

new concrete, loose wall surface, wall for production area of chemical and printing factory, clean area and central kitchen etc.

UFlex® METOP Kitt01 Putty for wall sealing

Characteristics

- High bond strength
- Water and alkali resistance
- Resistant to cold, hot, humid & temperature changes
- Grade 0 mildew proof

Recommend Application

Variety of concrete, cement wall, Office, Shopping mall, Food storage area etc

Construction

Scraping once or twice

UFlex® METOP Kitt719 Putty for Wall reinforcement

Characteristics

- High bond strength
- Water and alkali resistance
- Resistant to cold, hot, humid and temperature changes
- Impact resistance
- Grade 0 mildew proof

Recommend Application

Production & Storage area for: slaughterhouse, meat, dairy, baking or other food industry. Walls for school, hospital and office.



UFlex® Efficient anti-mold wall system

UFlex® METOP Ober609 Water-based mildew-proof cleaning top coating

UFlex® METOP Ober701 Water-based mildew-proof matte top coating

Characteristics

- Dense coating
- Chemical corrosion resistance
- Resistance to cold, hot and humid temperature change
- Impact resistance
- Grade 0 mildew proof
- Resistant to high-pressure warm water flushing
- Stain resistant and easy to clean

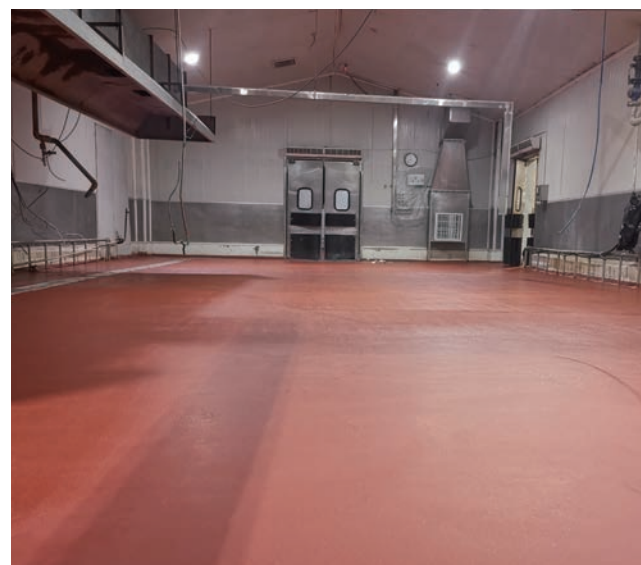
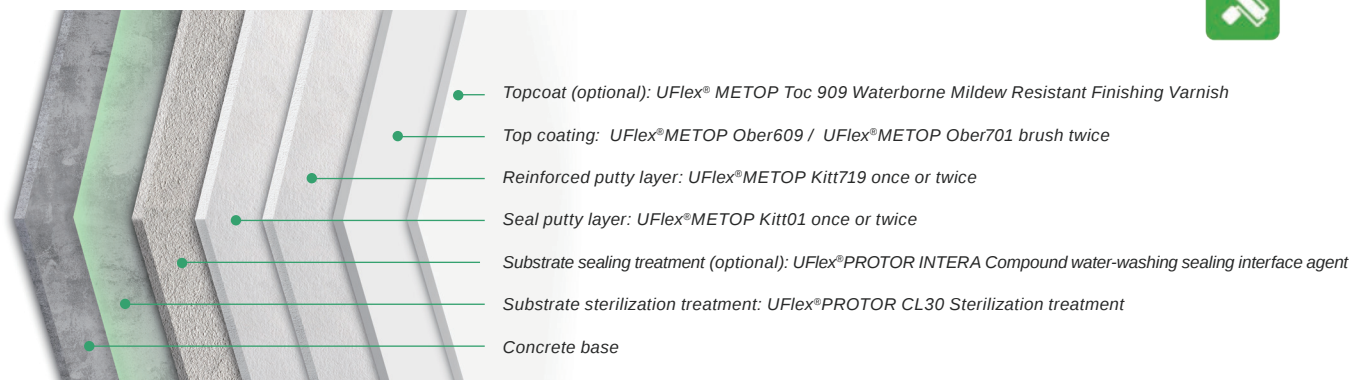
Recommend Application

Production & Storage area for: slaughterhouse, meat, dairy, baking or other food industry. Walls for school, hospital and office.

Resistant bacteria species: Staphylococcus aureus, Escherichia coli

Anti-mold species: Alternaria, Aspergillus, Penicillium citrinum, etc.

Construction Process



食品工場
食品厂



化学工場・印刷工場
化学药品厂 / 印刷厂



厨房
厨房



車輛通行道路
车辆通行道路



機械工場
机械工厂



自動車修理工場
汽车修理厂

UQESH® MCF Waterborne polyurethane colored sand self-leveling 3~7mm

UQESH® PUF Waterborne polyurethane cfloating colored sand system

MCF Slight concave convex anti-skid surface

PUF Smooth surface

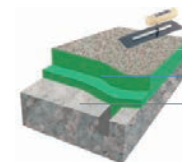
Characteristics

- Slight textured / smooth surface
- Dense and extreme hardness
- High compressive strength & abrasion resistance
- One-piece forming without dead angle
- Odorless and environment-friendly
- Excellent resistant to aggressive chemicals

Recommend Application

Suitable for shopping malls, airports, pharmaceutical, milk powder, tobacco and wherever with high requirements on the surface of long-lasting durability.

Construction Process



Top Coating: UQESH® MCF 3-5mm

Primer: UQESH® IF 1-2mm

Concrete Substrate



Kitchens



Wards & Clinics



Shopping Malls



UQESH® IF-EC

Anti-static water-based polyurethane mortar self-leveling system 4~7mm

Characteristics

- Temperatures resistance 40-60°C
- Anti-Static
- Mild Anti-slip
- Mololayer & seamless, smooth & matte
- Excellent resistant to chemicals
- Long-lasting durability
- Curing rapidly & short construction period

Recommend Application

The processing areas with strict requirements on chemical resistance and electrostatic conductivity, and wherever electrostatic current needs to be controlled. Chemical processing, solvent storage and processing workshops, electronic components production and assembly workshops.

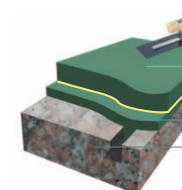
Applications Jiuhua & Huayuan (plant extraction workshop), Haidi chemical, Yako chemical, Xingye chemical, etc

Technical Index Rg<1*10⁹Ω (GB/T 1410-1989)

Test voltage 100V

(Professional construction operations shall be carried out according to the site conditions)

Construction Process



Top Coating: UQESH® IF-EC 4-6mm

The conduction floor net

Primer: UQESH® IF 1-2mm

Concrete Substrate



Factories and workplaces where static electricity needs to be avoided



Chemical Plant
/ Printing Plant



UQESH® HEFloor-A

Fireproof grade A

Non-pyrophoric water-based polyurethane composite floor system

4~10mm



Characteristics

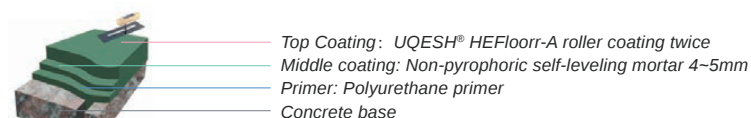
- Chemical resistance
- Smooth & Matte
- Wear-resistant
- Can be steam rinsed for a short time
- Non-pyrophoric, pass «GB50209-2010» appendix A
- Foundation moisture resistance
- High hardness(Mitsubishi pencil ≥ 4H)
- Fast curing and short construction period

Recommend Application

Power workshop, chemical warehouse, storage area, chemical plant, pharmaceutical workshop, garage, electronic industry workshop, food industry, etc.

Applications Anheuser-Busch InBev, TSINGTAO BREWERY, New Hope Dairy, Meiji Dairy, CR NG Fung

Construction Process



UQESH® CR Waterborne polyurethane mortar for vertical arc surface



Characteristics

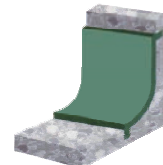
- vertical height can be up to 30cm
- Monolithic, seamless
- Long-lasting durability
- Polyurethane mortar for vertical curved
- Temperatures resistance 60-80°C
- Suitable for high temperature steam washing

Recommend Application

Vertical surfaces, such as bases, drains, container bottom columns, pools, spill storage tanks.

Construction Process

- UQESH®CR Pressing molding
- UQESH®HEFloor-S Special cover for water-based polyurethane



UQESH® E200 Polyurethane caulking

Characteristics

- Solvent free, Eco & Safety
- Chemical resistance
- Colorful
- Smooth surface, easy to clean, stain resistant
- Seam width 4~30mm
- No primer required for concrete base

Recommend Application

Production and packaging areas in dairy and baking industries, clean workshops, beer, beverage and other filling areas, laboratories; cosmetic workshops; electronic components production and assembly;

It is suitable for elastic sealing of slits and expansion joints on polyurethane and cement floors.

UQESH®

Thin Coating Waterborne Polyurethane System Combination

Has been successfully applied

1,000,000⁺sqm

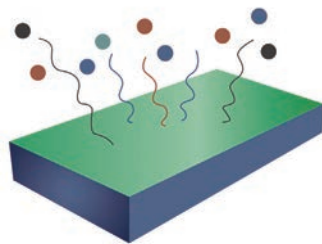
UQESH® water-based polyurethane mortar system is derived from the unique Japanese synthetic castor oil polyurethane technology, which has been applied in Japan for more than 30 years. It not only leads the peers in technology and stability, but also meets the high demand for environment-friendly materials, and has been widely promoted and applied in China.

UQESH® water-based polyurethane mortar system also has excellent performance of environmental protection, durability (wear resistance and compressive resistance), food safety contact and resistance to high temperature hydrolysis, aggressive chemicals resistance and moisture resistance, and maintains the leading position with consistent stable quality.

UQESH® is currently the designated flooring material brand of well-known international and domestic enterprises, such as Dali group, Budweiser InBev, Swire Coca Cola, New Hope, Wens, Fujiya, Wal Mart, Tsingtao Beer, Taoli food. At the same time, we have completed a large area of clean workshop for Apple supply chain (BIEL Optics) in the electronic field, and the application of thin coated water-based polyurethane mortar flooring system has exceeded 1,000,000 square meters.

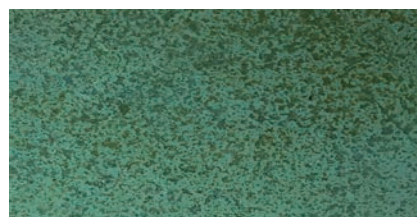


Defects of solvent polyurethane mortar products



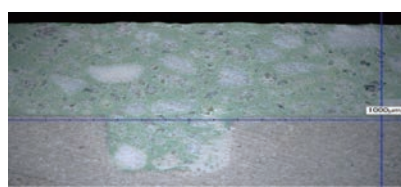
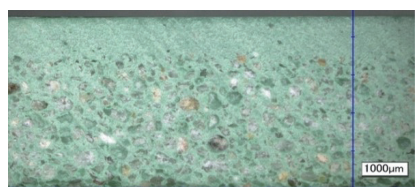
Toxic Pollution

The volatile toxicity of the solvent is great, the VOC of the product exceeds the standard, and it produces long-term pollution in the close environment.



Poor heat and hydrolysis resistance

The solvent did not participate in the reaction, reducing the effective resin content of the system. And the wetting and wrapping of the aggregate were insufficient. Effecting by the impact of heat source, especially alkaline detergent, the surface resin was easily washed away, resulting in the exposed aggregate, which was difficult to resist aggressive chemicals, and then the overall coating was damaged and failed.



The aggregate and resin of UQESH® water-based polyurethane floor system are evenly distributed.

Separation of resin and aggregate

With the addition of the solvent, the viscosity of the system decreases rapidly, and the proportion of aggregate is large, which is easy to precipitate in the bottom layer. Especially in the case of heating, the shrinkage rate between resin and aggregate is not consistent, resulting in the phenomenon of "separation of bone and flesh" of the product, and the coating adhesion fails.



After circulating at -20°C - 80°C for 10 hours, the samples of aggregate precipitation have become stiff and fall off.



Poor stain resistance

Solvent-based products in the solvent evaporation process (especially high boiling point solvent) forms the micropores on the floor surface, are easy to leave dirt and can not be cleaned, breeding bacteria easily.



Poor encapsulation and high brittleness of resin

The solvent volatilization process brings out some water molecules, which hinders the hydration of cement. The wetting and encapsulation of the resin become poor. Brittleness increases and toughness is poor.

UQESH® water-based polyurethane flooring system

Renewable and environmentally friendly materials from plants

UQESH® composite materials are mainly derived from plant castor oil polyols, and the materials do not contain solvents, ensuring that UQESH® have very low or even zero VOC emissions, fully meeting customers' requirements for environmental protection and health.

As a basic non-edible oil, castor oil is a renewable resource.

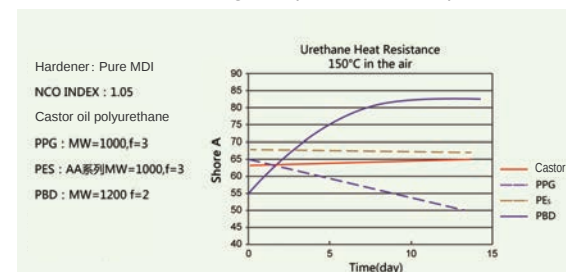


Resistance to heat and high temperature steam pressure

Most of the resin flooring system soften at 50-60°C. The floor will be damaged in a short period of time, such as empty drums, chipping, and dispersing, after softening by repeated high and low temperature, especially with steam and hot water. Also, the heat from the friction of tires on heavy-duty vehicles is enough to soften the resin. The unique UQESH® heavy-duty polyurethane mortar system is rarely softened when the temperature exceeds 130°C. Resin carbonization may occur when temperature above 220°C. In addition, the strong toughness of UQESH® flooring system makes it possible to withstand high temperature extreme thermal shock. UQESH® is able to withstand both conventional and normal boiling water flushing.

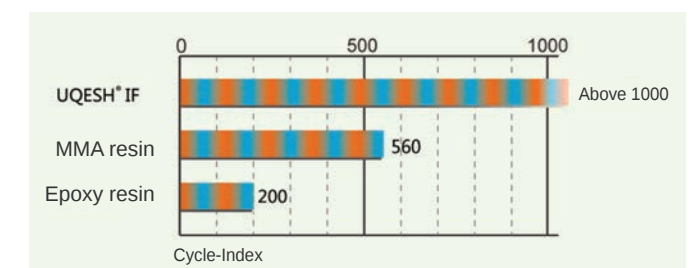
Heat resistance

The high temperature resistance of castor oil polyurethane is also good. (Pure resin state)



Hot and cold cycle test (floor state)

Hot water (90 °C), cold water (5°C), alternating with each other for 5 minutes as a cycle.



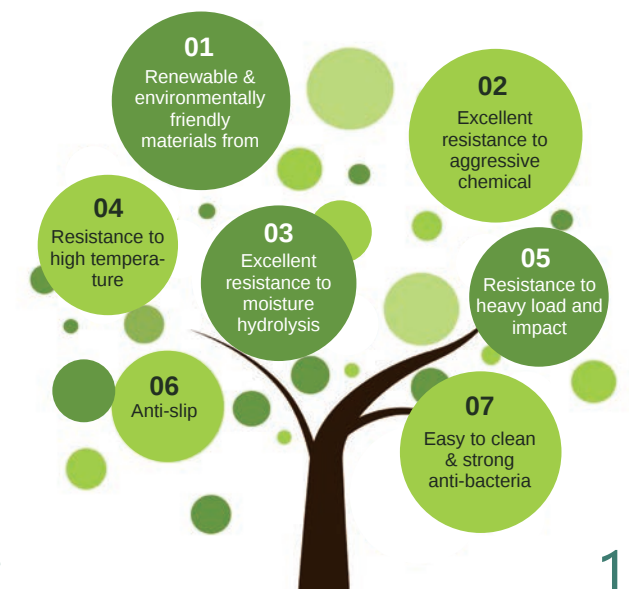
UQESH® is suitable for -40°C -130°C high temperature environment and even 150°C steam washing. UQESH® has high toughness and excellent hydrolysis resistance, making it capable of withstanding extreme thermal shock at high temperature.



UQESH®
Fujiya (Hangzhou) 5 years later

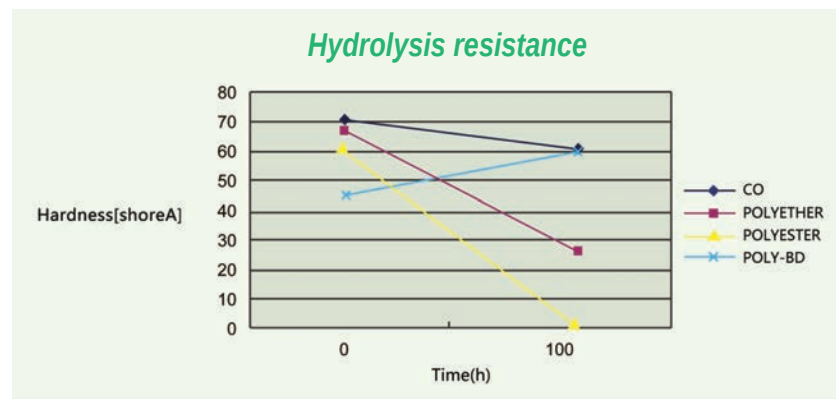


other brands
serious fading at room temperature



Excellent resistance to moisture hydrolysis

Compared with traditional resin materials, castor oil polyurethane system has more excellent hydrolytic resistance, which maximizes the stability in high temperature and humidity. UQESH® flooring system is suitable for application in humid environment, even if there are mixed corrosive substances, as long as there are reasonable maintenance measures, will not affect its effect. However, with good maintenance, the impact can be reduced. Effective cleaning and maintenance methods will be appropriate to extend the service life of the floor and improve the appearance of the floor.



Curing agent: Polymeric MDI (NCO INDEX=1.05)
PCT condition: 121°C, 100wt%, 0.2Mpa

Easy to clean, and strong anti-bacterial

UQESH® flooring system is an environmental friendly product system, consisting of four components: castor oil polyol, crude MDI, inorganic aggregate, and color paste. Stir well in proportion, spread on the substrate surface to form a dense protective layer, which is dense and leak-proof throughout the thickness range. Oil, grease, syrups and other contaminants spilled or dripped from the production process would not penetrate into the material. In addition, it would not leave visible traces after being cleaned with chemical cleaners.

Antibacterial test (floor state)

	E. coli bacteria	Staphylococcus aureus bacteria	
Unprocessed test piece	8.9×10 ⁵	7.1×10 ⁵	Untreated floor
UQESH® IF	< 10	< 10	treated floor
UQESH® PF	< 10	< 10	
UQESH® CR	< 10	< 10	

Test method: according to JIS Z2801.5.2 standard, 105/ml bacteria is dropped into the a test tablet. After 24 hours, the bacterial number is measured.

Excellent resistance to aggressive chemical

Chemicals Resistance Test

	Reagent	Water-Based Polyurethane Mortar
Acid	Sulphuric acid (10%)	⊙
	Nitric acid (10%)	△
	Phosphoric acid (10%)	⊙
	Acetic acid (10%)	○
	Hydrochloric acid (10%)	○
	Lactic acid (10%)	⊙
	Formic acid (40%)	○
	Citric acid (10%)	⊙
	Oxalic acid (10%)	⊙
	Tartaric acid (10%)	⊙
Alkali	Sodium hydroxide (30%)	⊙
	Calcium hydroxide (saturated)	⊙
	Ammonia (25%)	⊙
	Sodium hypochlorite (1%)	⊙
	Barium carbonate (saturated)	⊙
Salts	Sodium bicarbonate (saturated)	⊙
	Sodium carbonate (saturated)	⊙
Salts	Calcium chloride (saturated)	⊙
	Calcium sulfate (saturated)	⊙
	Toluene	⊙
	Xylene	⊙
Solvents	Methyl alcohol	⊙
	Acetone	⊙
	Phenol (10%)	X (swelling)
	Animal fats and vegetable oils	⊙
Grease & food	Gasoline	⊙
	Refined kerosene	⊙
	Motor oil	⊙
	Saline solution	⊙
	Soy sauce	⊙
	Alcohol	⊙
	Fruit juice	⊙
	Detergent	⊙
	Milk	⊙

Test method: take JIS A5705 as the test benchmark; carry on 48 hours drip test.

(Note: Dimethylformamide DMF, Ammonium dimethyl acetate and N-grade pyrrolidone produce significant corrosion)

Evaluation: ⊙ No abnormal ○ Slight changes △ Have changes X Adverse

UQESH® provides SGS test report on chemical resistance of common cleaning and disinfection chemicals used in food and drug production.

SGS Test Report

No. : GZIN161202337CCM_CN

(Corrosion resistance test of common chemical cleaning disinfectants in food production)

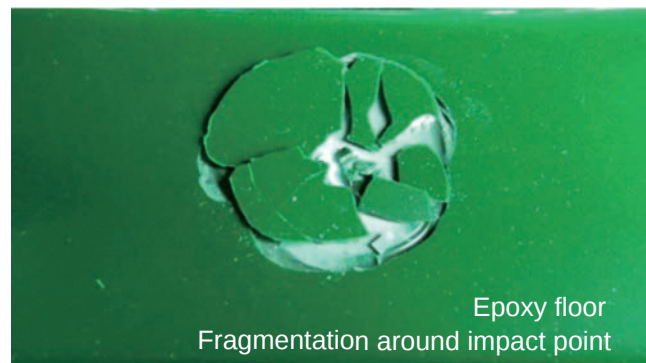
Reagent	UQESH®	Reagent	UQESH®
10% (m/m) Bottle Additives YI XI YANG C	R	Bo Rui De® Silicone Oil Pure Bright Liquid	R
10% (m/m) XY-12	R	10% (m/m) ACTI-BROM® 7342 Biological Dispersant	R
10% (m/m) AC-3 CIP Acid Cleaner	R	10% (m/m) Nalco® 7330 Bactericide	R
10% (m/m) Bottle Additives YI XI YANG A	R	10% (m/m) Nalco® 3DTRASAR™ 3DT226 Cold Water Treatment Agent	R
10% (m/m) OXONET Oxidizing Agent	R	Tai Hua Shi® Lubricant	R
10% (m/m) Quaternary Ammonium Salt Disinfectant	R	10% (m/m) Tai Hua Shi® SPARTEC Quaternary Ammonium Salt Disinfectant	R
Quaternary Ammonium Salt Disinfectant	R	30% (m/m) NaOH, 85°C	R
10% (m/m) OXODES Acid Generator	R	30% (m/m) NaOH	R
10% (m/m) OXOMIA ACTIVE Peracetic Acid Fungicides	R	Market Beer	R
10% (m/m) TOPAX 19 Alkaline Foam Cleaner	R	12% (m/m) H ₃ PO ₄ + 12% (m/m) Citric Acid	R
10% (m/m) STABILON ACP Bottle Additives of Anti-corrosion Glass Bottles	R	12% (m/m) Arawana® Peanut Oil	R
10% (m/m) SU 626 Heavy Duty Foam Gel Cleaner	R	12% (m/m) Sodium Hypochlorite	R
Bei Jing Mao Hua® Super Chain Lubricants MH-RD	R	12% (m/m) H ₂ O ₂	R

L-Limited resistance, R-Resistance, NR-Non-resistance

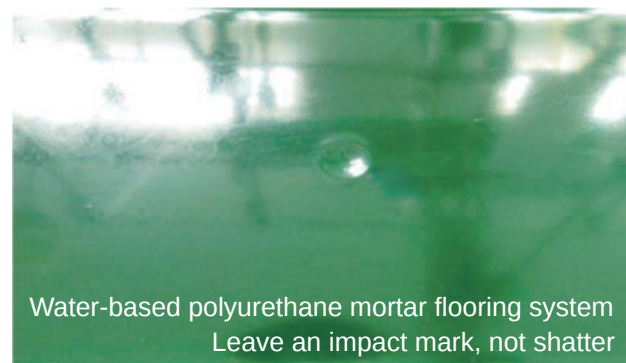
Detailed test files are available

Resistance to heavy load and impact

UQESH® flooring system is a hybrid of organic polyurethane and inorganic aggregate. It has the high toughness of polyurethane material and the hardness of inorganic ground, and it is an organic and inorganic composite of both. Compared with the hardness and brittleness of ordinary epoxy resin floor, polyurethane mortar floor has enough toughness and strength, which will not break when impacted by external forces, and is more wear-resistant and pressure-resistant.



Epoxy floor
Fragmentation around impact point



Water-based polyurethane mortar flooring system
Leave an impact mark, not shatter

Anti-slip

UQESH® flooring system offers a variety of surface textures, ranging from smooth surfaces, terrazzo textures, to very rough non-slip surfaces, depending on the environment of the use area. In addition, UQESH® can form an integral surface throughout the processing area by reasonable collocation, even the grounding lines also form an integral surface without leaving a joint gap. In the wet processing area, the ground can maintain a certain slope so that water and liquid spills can be discharged into the drainage ditch smoothly. The excellent waterproof performance of UQESH® flooring system ensures that there will be no water accumulation on the surface of the floor. The cleanliness as well as the safety of the production area is guaranteed.



Before



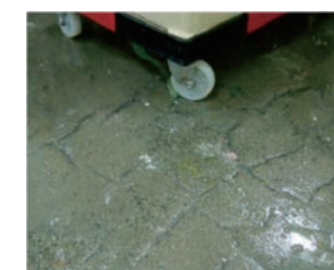
After



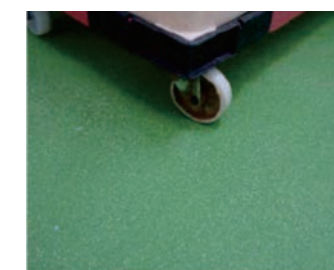
Before



After



Before



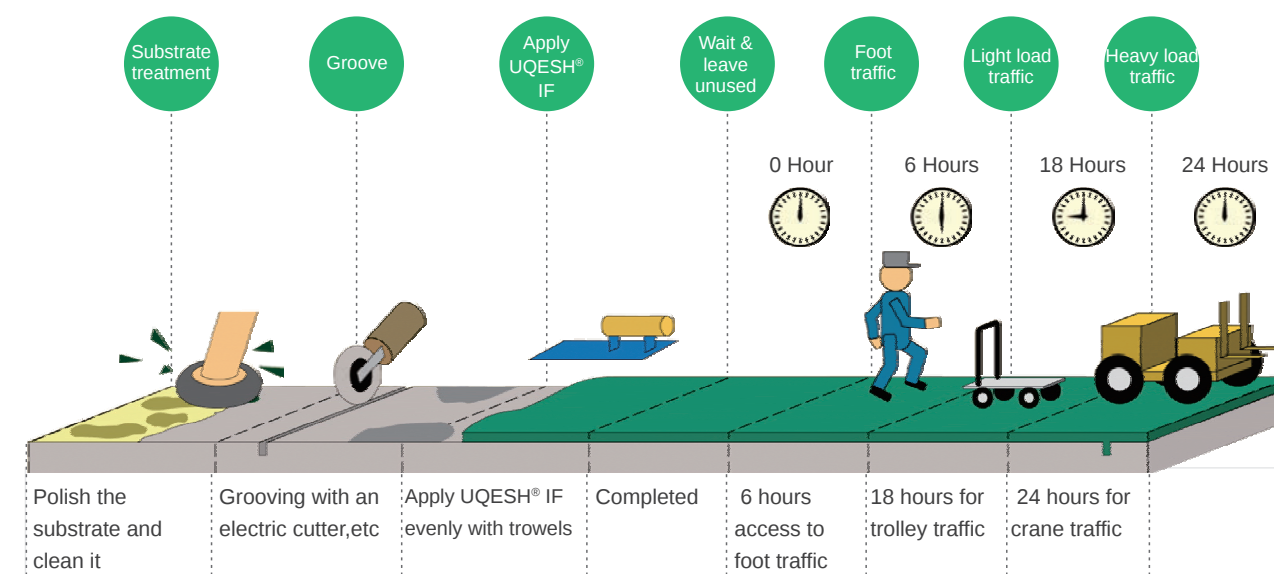
After

Short Construction Period

Especially suitable for maintenance and renovation with strict requirements on construction period.

UQESH® flooring system is able to cure rapidly. Generally, 6 hours access to foot traffic, 18 hours for personnel operation, 24 hours for general mechanical operations and installation, and about a week for mechanical operations.

Application Process



UQESH® Color System

UQESH® is able to customize the color according to customer requirements.



Rich color system

■ The advantages of dispersants

With the advanced and exquisite color matching system, UQESH® color system is more accurate, with no chromatic aberration, achieves color schemes for customers.

■ The uniqueness of carrier

UQESH® color system has a unique resin carrier, making the color more uniform and stable.

Long term use without fading

■ UQESH® polyurethane system is durable, reasonable towing and washing will make the floor surface produce unique luster. A large number of engineering cases prove that UQESH® is stable and reliable.

■ All colors come from a unified basic color paste, and the color system is realized through a unique mixing system, without worrying about the color durability.

Please contact the UQESH technical personnel to confirm the actual color effect.

Beer Industry



Dairy Industry



Baking Industry



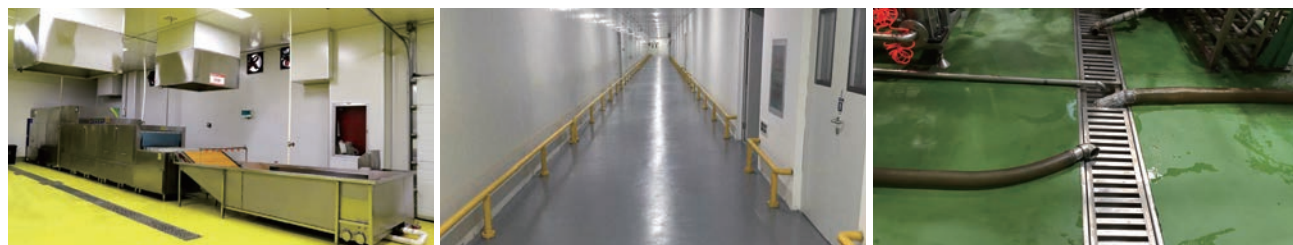
Beverage Industry



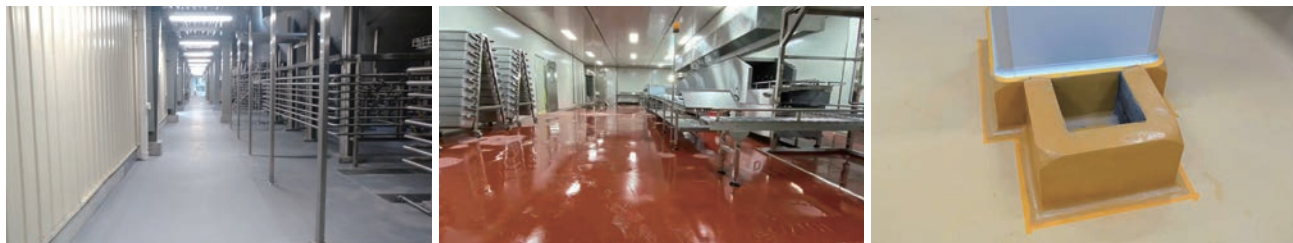
Meat Industry



Candy & Snacks Industry



Condiment Industry

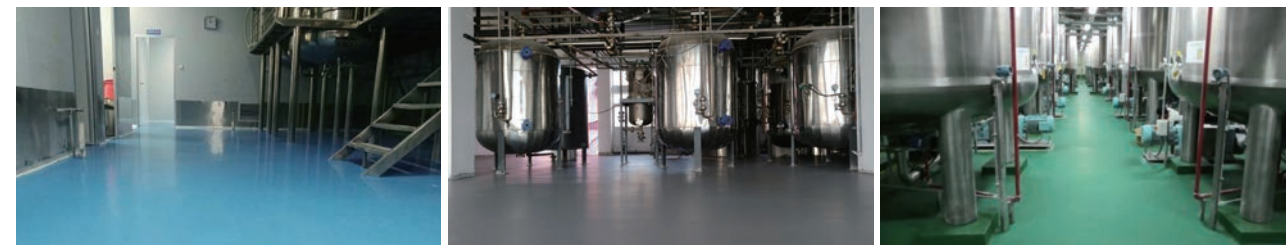


Central Kitchen

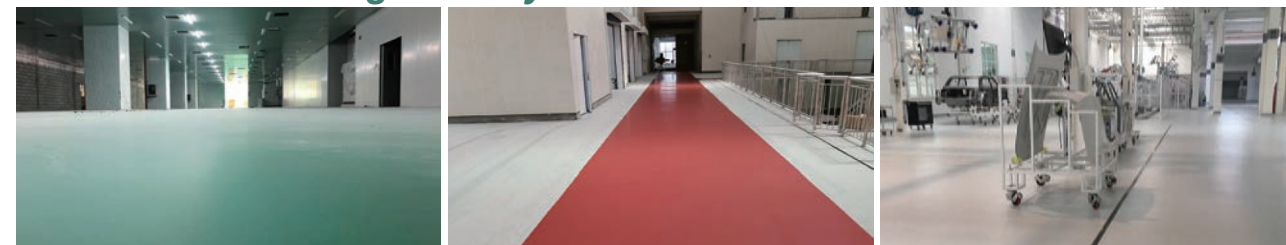


江门美青中央厨房、巴肚吆中央厨房、食悦中央厨房、河北食全十美中央厨房
惠州康裕中央厨房、江西 / 湖南 / 郑州 / 深圳维仕、劲厨深圳鲜誉中央厨房等

Pharmaceutical Industry



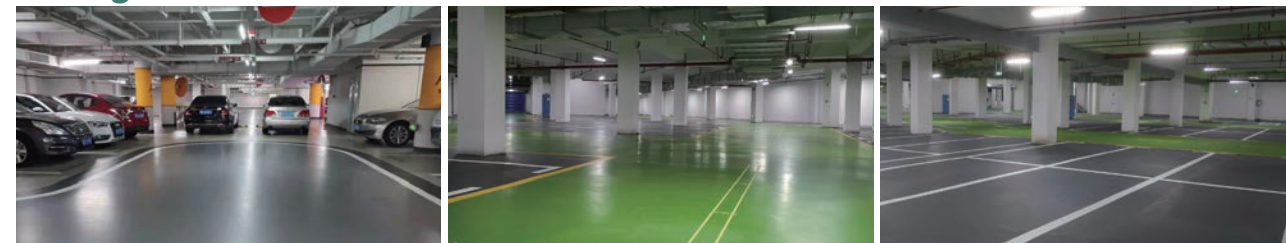
Precision Machining Industry



Heavy Industry



Garage



会龙山、溪谷、苏州东沙湖基金中心、湖南长沙湘雅医院、
厦门宝龙御湖官邸项目、惠州华贸中心、深圳大剧院

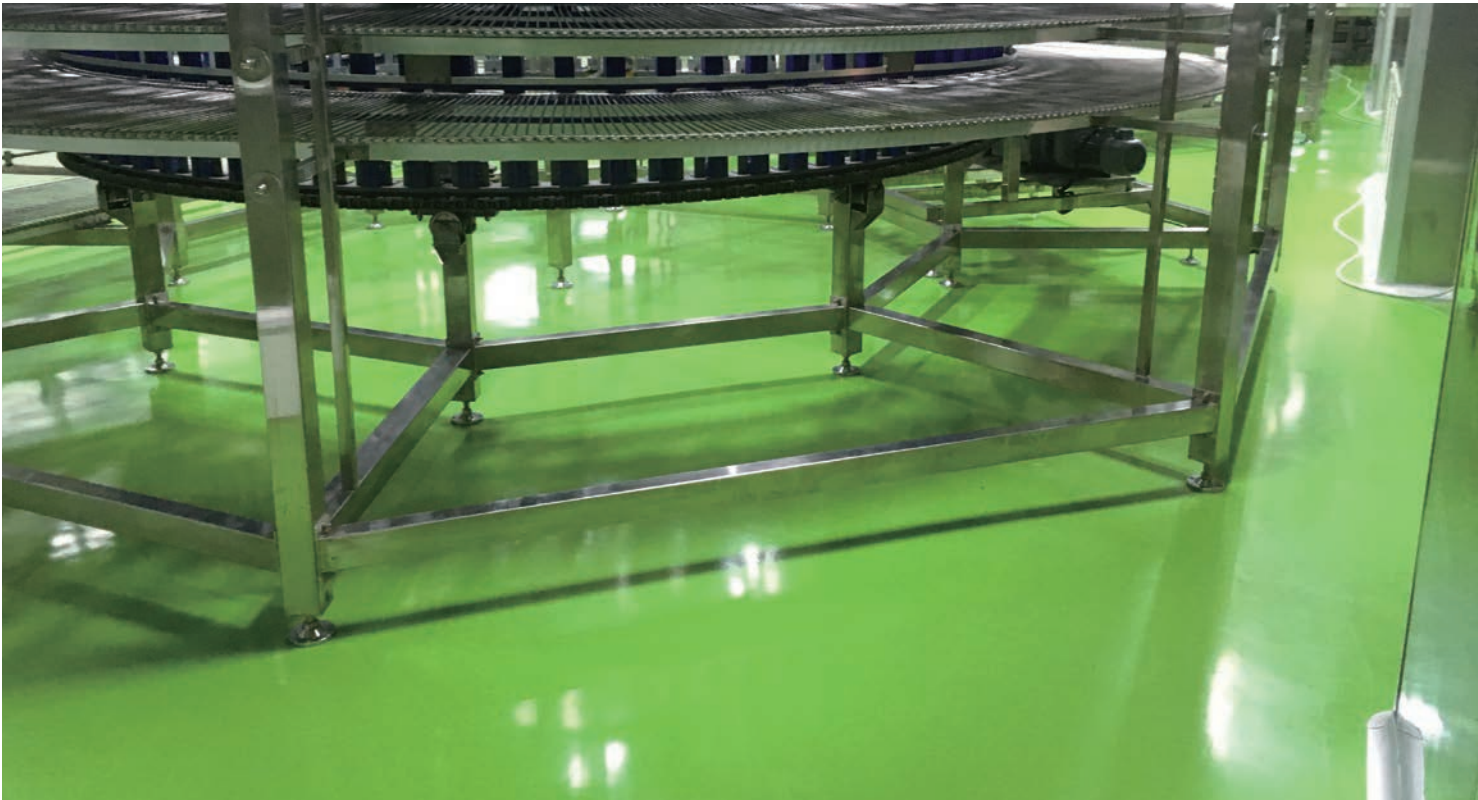
太陽光
光合成 CO_2 H_2O

塗り床材 地坪材料
防食塗料 防腐塗料
封止材 密封剤
フォーム FOAM

バイオポリオール
シリーズ
植物多元醇系列

Trust from World Famous Enterprises





Category \ Model	Self-leveling water-based polyurethane mortar			Heavy-duty	
	UQESH®IF	UQESH®PF-M	UQESH®PF-B	UQESH®SF	UQESH®SF-1
Type	Standard	Thin-coat	Thin-coat	Heavy-duty anti-skid	Light anti-skid
Gloss	Matte	Matte	Bright	—	—
Surface effect	Self leveling	Self leveling	Self leveling	—	—
Film thickness/mm	4~6	2~3	2~3	6~12	4~8
Fluidity/mm	139	154	154	—	—
7d Compressive strength/MPa	45	54.3	54.4	63.2	61.4
7d Bending strength/MPa	15	18.3	18.4	13.6	13.9
7d Tensile bond strength/MPa	≥3.0 (Crack of base concrete)	≥3.0 (Crack of base concrete)	≥3.0 (Crack of base concrete)	≥3.0 (Crack of base concrete)	≥3.0 (Crack of base concrete)
Dry friction coefficient (skid resistance)	0.61	0.56	0.54	0.80	0.64
Withstand temperature/°C	-20 ~ 60°C, Short time steam flushing	-10 ~ 50°C, Short time steam flushing	-10 ~ 50°C, Short time steam flushing	-40 ~ +130°C	-30 ~ +80°C
Impact resistance (1kg steel ball)	●	●	●	●	●
Alkali resistance (20%NaOH,72H)	●	●	●	●	●
Acid resistance (10%H2SO4,48H)	●	●	●	●	●
Oil resistance (120#solvent oil,72H)	●	●	●	●	●
Salt tolerance (3%NaCl, 168H)	●	●	●	●	●
Applicable scenarios	Long-term heat resistance and heavy load, contact with hot water, grease, syrup, common inorganic acid and alkali areas	Laboratory, beverage canning area, baking industry production and packaging area	Clean production area, electronic component production and assembly area, cosmetic workshop, underground garage	Heavy-duty equipment manufacturing workshop, food raw material handling workshop, cargo transportation aisle, etc	
Recommended product collocation	Top coat:UQESH®IF 2-4mm Primer:UQESH®IF 1-2mm Concrete base	Top coat: UQESH®PF -M/B 1-2mm Primer: UQESH®IF 1mm Concrete base		Top coat: UQESH®SF/SF-1 6-9mm with Sand Compaction Primer: UQESH®IF 1-2mm Concrete base	

Note: " ● " means qualified

Category \ Model	UQESH® Water-based polyurethane roller top coating			UFlex®Solvent Free Weather Resistant Polyurethane top coating		
	HEFLOOR-S	HEFLOOR-V	HF-V	TP100	TP325S	TP325V
Type	Cellulite effect	Frosted effect	Frosted effect	Transparent flat	Cellulite effect	Frosted effect
Gloss	Flat	Flat	Flat	Semi-Gloss	Semi-Gloss	Semi-Gloss
Film thickness/mm	0.1~1	0.1~1	0.1~0.15	0.1~2	0.1~0.15	0.1~0.15
7d Tensile bond strength/MPa	≥3.0 (Crack of base concrete)	≥3.0 (Crack of base concrete)	≥3.0 (Crack of base concrete)	≥3.0 (Crack of base concrete)	≥3.0 (Crack of base concrete)	≥3.0 (Crack of base concrete)
Abrasion resistance [500g/(60r/min)/100 times]/g	0.0037	0.0035	0.0022	0.0018	0.002	0.0023
Dry friction coefficient (skid resistance)	0.62	0.66	0.59	0.54	0.57	0.59
Impact resistance (1kg steel ball)	●	●	●	●	●	●
Alkali resistance (20%NaOH,72H)	●	●	●	●	●	●
Acid resistance (10%H2SO4,48H)	●	●	●	●	●	●
Oil resistance (120#solvent oil,72H)	●	●	●	●	●	●
Salt tolerance (3%NaCl, 168H)	●	●	●	●	●	●
Applicable scenarios	Garage system, computer room, power distribution room, vegetable cleaning area, post-processing workshop of food factory (non-hot area), maintenance workshop and other areas			Clean production area, especially those with high requirements on wear resistance, easy cleaning and weather resistance area		
Recommended product collocation	Topcoa:HEFLOOR-S/V sealing cover Middle coat:HEFLOOR-PT putty cushion Primer:HEFLOOR-S/ PF sealing primer Concrete base			Topcoa: HF-S/V or TP325S/V or TP100 cover Primer: epoxy self leveling or polyurethane primer Concrete base		

Note: " ● " means qualified

Category	Model	UFlex®Efficient anti-mold wall system				
		PROTOR CL30	PROTOR INTERA	METOP Kitt01	METOP Kitt719	METOP Ober609
Type		Sterilization & clear mold solution	Composite water-based sealing interface agent	Putty for wall sealing	Putty for Wall reinforcement	Water-based mildew-proof cleaning top coating
Recommended dosage (kg / m2 / course)		0.3~0.45	0.3~0.4	1.5~2	1.0~1.2	0.1~0.12
Film thickness (mm / course)			0.01~0.02	0.8~1.2	0.8~1	0.08~0.1
Resistant bacteria		Staphylococcus aureus, Escherichia coli				
Anti mold species		Alternaria, Aspergillus, Penicillium citrinum, etc.				
Applicable scenario		1. Production areas and storage areas in the food industry such as slaughterhouses, meat products, dairy products, bakery products, and snack products. 2. Strict requirements for dust-proof, mildew-proof, anti-corrosion, scrub-resistant beverage, food, pharmaceutical and other industries 3. Public places newly built and renovated indoors: schools, kindergartens, offices, hospitals, etc.				
Recommended product collocation		<i>Topcoat (optional): UFlex® METOP Toc 909 Waterborne Mildew Resistant Finishing Varnish</i> <i>Top coating: UFlex®METOP Ober609 / UFlex®METOP Ober701 brush twice</i> <i>Reinforced putty layer: UFlex®METOP Kitt719 once or twice</i> <i>Seal putty layer: UFlex®METOP Kitt01 once or twice</i> <i>Substrate sealing treatment (optional): UFlex®PROTOR INTERA Compound water-washing sealing interface agent</i> <i>Substrate sterilization treatment: UFlex®PROTOR CL30 Sterilization treatment</i> <i>Concrete base</i>				

Category	Model	Anti-static water-based polyurethane mortar self-leveling	Anti-static water-based polyurethane cover
		UQESH®IF-EC	UQESH®HEFLOOR-EC
Surface resistance (Ω)		1x10 ⁶ ~ 10 ⁹	3x10 ⁷ ~ 10 ⁹
Volume resistance (Ω)		5x10 ⁶ ~ 10 ⁹	6x10 ⁷ ~ 10 ⁹
Applicable scenario		Workshops that require anti-static floors, such as electronics factories, chemical factories, laboratories, etc.	
Recommended product collocation		<i>Top Coating: UQESH® IF-EC 4-6mm</i> <i>Conductive ground grid</i> <i>Primer: UQESH® IF 1-2mm</i> <i>Concrete base</i>	<i>Top Coating: UQESH®HEFLOOR-EC cover</i> <i>Middle coating: epoxy self-leveling conductive layer</i> <i>Conductive ground grid</i> <i>Putty layer: epoxy putty layer</i> <i>Primer: epoxy self-leveling primer</i> <i>Concrete base</i>

The above parameter data are obtained based on laboratory environmental tests and are not used as actual application environment data.

