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UQESH®

UQESH®
优葵希

Castor oil based waterborne polyurethane

CLEAN FLOOR SYSTEM & MILDEW-PROOF WALL SYSTEM

Sustainable quality assurance from Japan

ISO9001-2015

ISO14001-2015

GMP certification enterprise production

French indoor environmental testing A + certification

HACCP food safety system certification

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*	
	UFlex® METOP Toc909	*Waterborne Mildew Resistant Finishing Varnish*	
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

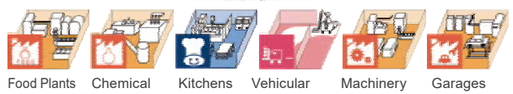
- *4-6mm Self-leveling*
- *Durable*
- *Abrasion resistance*
- *Chemicals resistance*
- *Monolithic, seamless, smooth, matte*
- *Curing rapidly & short construction period*
- *-20℃~60℃ for frequent use and steam washing occasionally for a short time*

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*
- *Monolithic, seamless*
- *Chemicals resistance*
- *Smooth surface & easy to clean*
- *Curing rapidly & short construction period*
- *-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, under-ground garages, electronic components production and assembly, tobacco industries, etc.

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

Construction Process

UQESH®SF *Heavy-duty non-slip waterborne polyurethane mortar* 6~12mm

UQESH®SF-1 *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*
- *Durable*
- *Resistance to heavy load*
- *Special anti-slip surface*
- *Curing rapidly*
- *Excellent resistance to heavy impact*

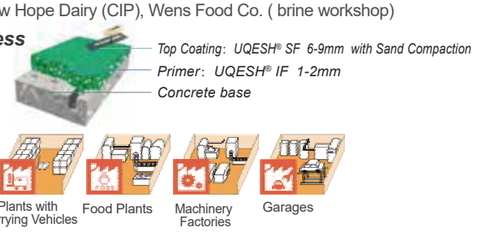
Recommend Application

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*
- *Substrate moisture tolerance*
- *Excellent resistant to aggressive chemicals*
- *Water-based and environment-friendly*
- *Strong Hardness (Mitsubishi Pencil 24H)*
- *Short construction period*

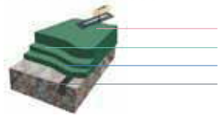
Recommend Application

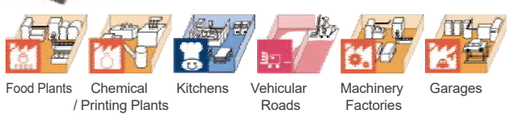
Garages , machine rooms, power distribution rooms, clean vegetable areas, post treatment workshops (non hot areas) of food factories, maintenance workshops

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

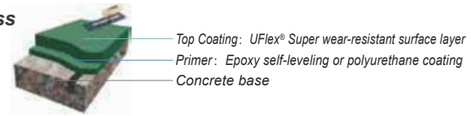
Applied to epoxy self-leveling or polyurethane floor surface layer to enhance wear resistance and scratch resistance, easy to clean and leave no stains.

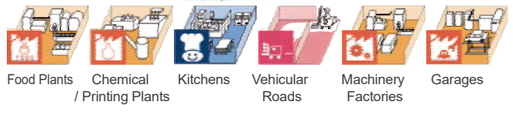
Suitable for clean production areas, especially for areas with high requirements for wear-resistance, easy cleaning and durability.

Applications

FAW Hongqi, CRRC Sifang Locomotive, TSINGTAO BREWERY, Anheuser-Busch InBev, Mengniu Diary, 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*

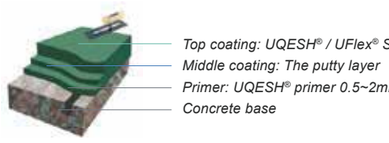
Recommend Application

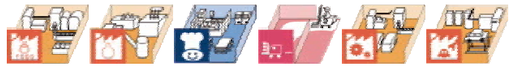
Production and packaging areas for in dairy and baking industries, clean workshops, filling areas for beer and beverages

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

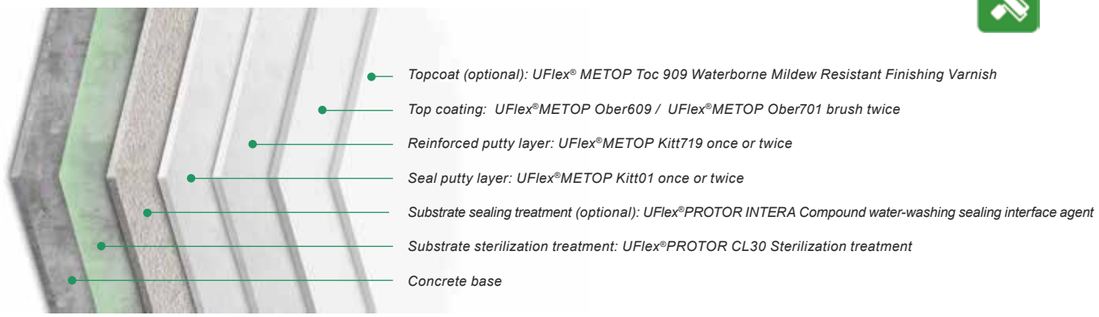
Anti-mold species: Alternaria, Aspergillus, Penicillium citrinum, etc.

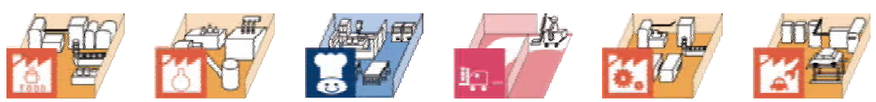
UFlex® METOP Toc909 *Waterborne Mildew Resistant Finishing Varnish*

Characteristics
- *Dense coating*
- *Chemical corrosion resistance*
- *Resistance to cold, hot and humid temperature change*
- *Impact resistance*

Characteristics
- *Grade 0 mildew proof*
- *Resistant to high-pressure warm water flushing*
- *Anti-graffiti & easy to clean*

Construction Process





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

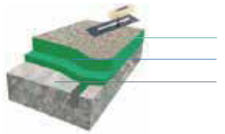
PUF Smooth surface

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



UQESH®IF-EC

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

Characteristics
- *Temperatures resistance 40-60℃*
- *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.

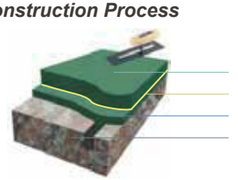
Applications Jiuhua & Huayuan (plant extraction workshop), Haidi chemical, Yako chemical, Xingye chemical, etc

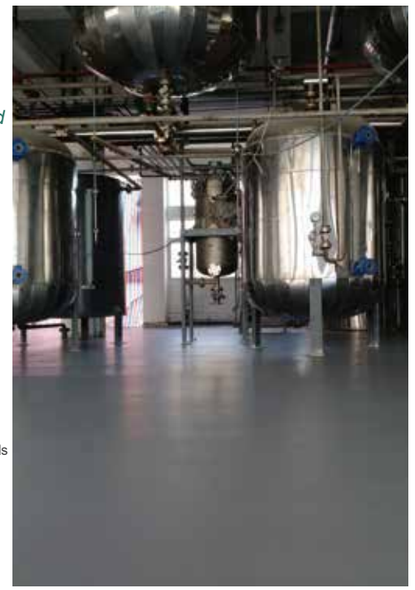
Technical Index Rg<1*10⁹Ω（GB/T 1410-1989）
Test voltage 100V
(Professional construction operations shall be carried out according to the site conditions)

Factories and workplaces where static electricity needs to be avoided

Chemical Plant /Printing Plant

Construction Process





UQESH®HEFloor-A

Fireproof grade A

Non-pyrophoric water-based polyurethane composite floor system

4~10mm

Characteristics

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

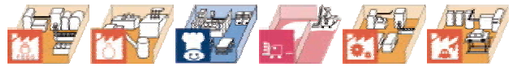
Recommend Application

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

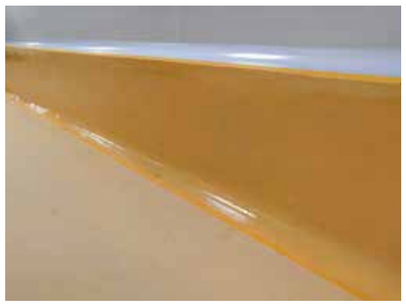
Construction Process

Top Coating: UQESH® HEFloorr-A roller coating twice
Middle coating: Non-pyrophoric self-leveling mortar 4~5mm
Primer: Polyurethane primer
Concrete base



UQESH®CR

Waterborne polyurethane mortar for vertical arc surface



Characteristics

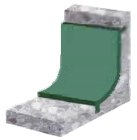
- *vertical height can be up to 30cm*
- *Polyurethane mortar for vetical curved*
- *Monolithic, seamless*
- *Temperatures resistance 60-80℃*
- *Long-lasting durability*
- *Suitable for high temperature steam washing*

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

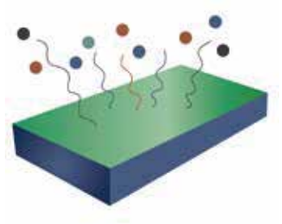
1,000,000+sqm

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 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 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.

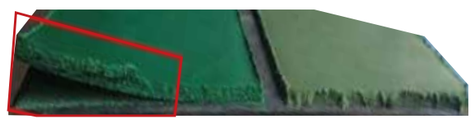
Poor encapsulation and high brittleness of resin

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.

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.

Features & Benefits of 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.

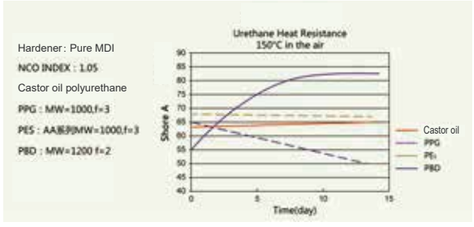
As a basic non-edible oil, castor oil is a renewable resource.

Resistance to heat and high temperature steam pressure

Most of the resin flooring system soften at 50-60℃. 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℃. Resin carvonization may occur when temperature above 220℃. 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.

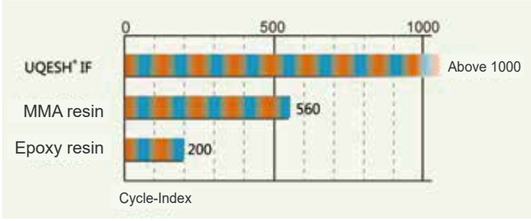
Heat resistance

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

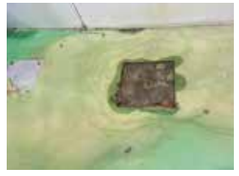


Hot and cold cycle test (floor state)

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



UQESH®
Fujiya (Hangzhou) 5 years later



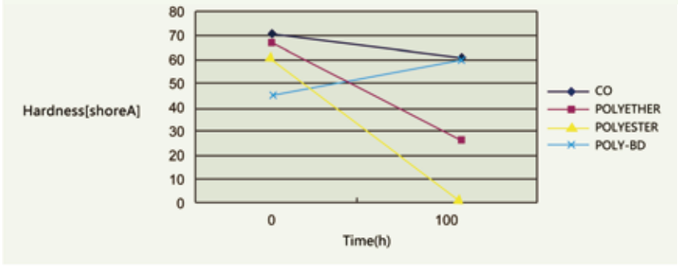
other brands
serious fading at room temperature

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

Hydrolysis resistance



Curing agent; Polymeric MDI（NCO INDEX=1.05)
PCT condition; 121℃, 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
UQESH® IF	<10	<10
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%）	◎
Salts	Barium carbonate（saturated）	◎
	Sodium bicarbonate（saturated）	◎
	Sodium carbonate（saturated）	◎

Reagent		Water-Based Polyurethane Mortar
Salts	Calcium chloride（saturated）	◎
	Calcium sulfate（saturated）	◎
Solvents	Toluene	◎
	Xylene	◎
	Methyl alcohol	◎
	Acetone	◎
	Phenol（10%）	X (swelling)
Grease & food	Animal fats and vegetable oils	◎
	Gasoline	◎
	Refined kerosene	◎
	Motor oilMotor 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®
10% (m/m) Bottle Additives YI XI YANG C	R
10% (m/m) XY-12	R
10% (m/m) AC-3 CIP Acid Cleaner	R
10% (m/m) Bottle Additives YI XI YANG A	R
10% (m/m) OXONET Oxidizing Agent	R
10% (m/m) Quaternary Ammonium Salt Disinfectant	R
Quaternary Ammonium Salt Disinfectant	R
10% (m/m) OXODES Acid Generator	R
10% (m/m) OXOMIA ACTIVE Peracetic Acid Fungicides	R
10% (m/m) TOPAX 19 Alkaline Foam Cleaner	R
10% (m/m) STABILON ACP Bottle Additives of Anti-corrosion Glass Bottles	R
10% (m/m) SU 626 Heavy Duty Foam Gel Cleaner	R
Bei Jing Mao Hua® Super Chain Lubricants MH-RD	R

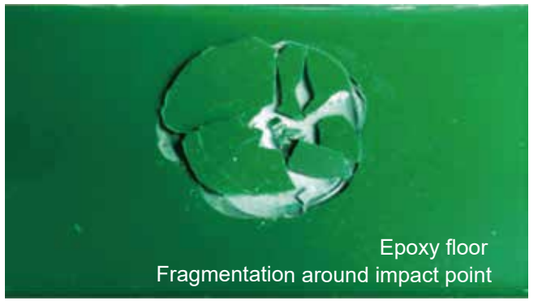
Reagent	UQESH®
Bo Rui De® Silicone Oil Pure Bright Liquid	R
10% (m/m) ACTI-BROM® 7342 Biological Dispersant	R
10% (m/m) Nalco® 7330 Bactericide	R
10% (m/m) Nalco® 3DTRASAR™ 3DT226 Cold Water Treatment Agent	R
Tai Hua Shi ® Lubricant	R
10% (m/m) Tai Hua Shi® SPARTEC Quaternary Ammonium Salt Disinfectant	R
30% (m/m) NaOH, 85℃	R
30% (m/m) NaOH	R
Market Beer	R
12% (m/m) H_3PO_4 + 12% (m/m) Citric Acid	R
12% (m/m) Arawana® Peanut Oil	R
12% (m/m)) Sodium Hypochlorite	R
12% (m/m) H_2O_2	R

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

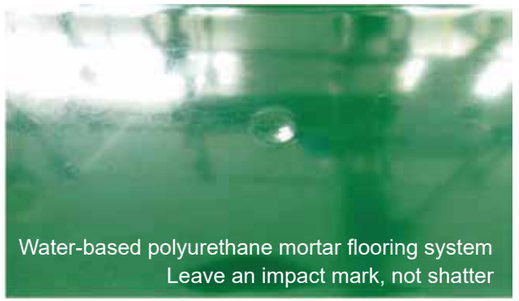
Detailed test files are available

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.

ISO9001-2015 ISO14001-2015

Before

After

Before

After

Before

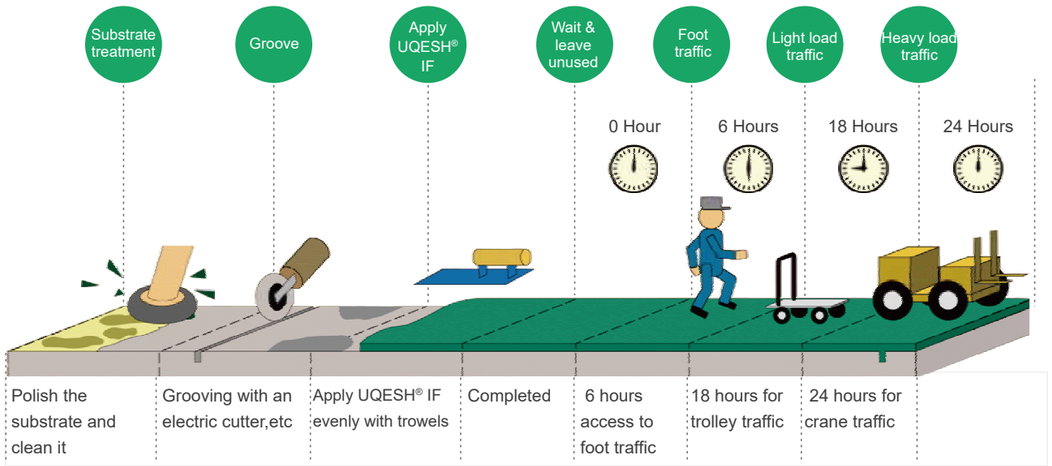
After

Short Construction Period

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

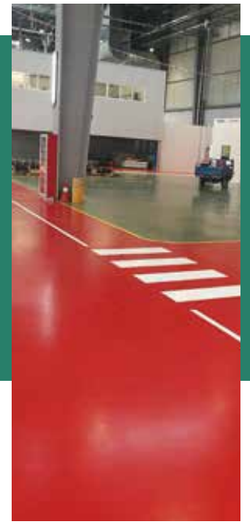
UQESH® flooring system is able to cure rapidly. Generally, , 6 hours access to foot traffic, 18 hours for personnel operation, 24 hours for general mechanical operations and installation, and about a week for mechanical operations.

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*

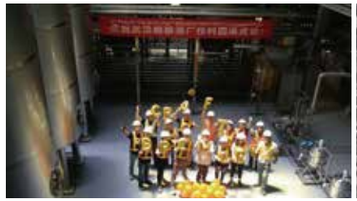
UQESH® color system has a unique resin carrier, making the color more uniform and stable.

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



华润雪花 ABInBev 百威英博 TSINGTAO 青岛啤酒 Carlsberg 嘉士伯嘉威啤酒 麒麟啤酒 Asahi 朝日啤酒

Dairy Industry



新希望 meiji 明治乳业 伊利 蒙牛 陽光 欧亚

Baking Industry



达利集团 桃李 资溪面包 YOUKA 奥昆 香港 美心 Maxim's

Beverage Industry



Coca-Cola 元气森林 鲜活果汁 sunjuice 乐虎 中沃

Meat Industry

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Garage

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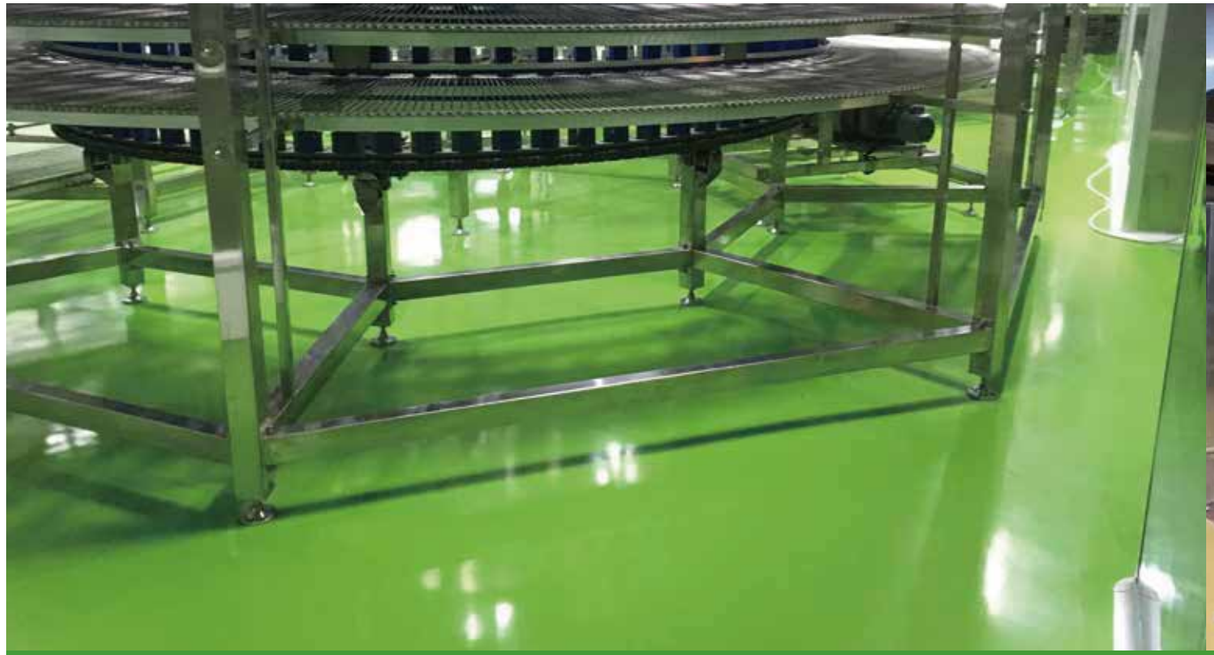

Category \ Model	Self-leveling water-based polyurethane mortar			Heavy-duty	
	UQESH®IF	UQESH®PF-M	UQESH®PF-B	UQESH®SF	UQESH®SF-1
Type	Standard	Thin-coat	Thin-coat	Heavy-duty anti-skid	Light anti-skid
Gloss	Matte	Matte	Bright	—	—
Surface effect	Self leveling	Self leveling	Self leveling	—	—
Film thickness/mm	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	*Topcoat (optional): UFlex® METOP Toc 909 Waterborne Mildew Resistant Finishing Varnish* *Top coating: UFlex®METOP Ober609 / UFlex®METOP Ober701 brush twice* *Reinforced putty layer: UFlex®METOP Kitt719 once or twice* *Seal putty layer: UFlex®METOP Kitt01 once or twice* *Substrate sealing treatment (optional): UFlex®PROTOR INTERA Compound water-washing sealing interface agent* *Substrate sterilization treatment: UFlex®PROTOR CL30 Sterilization treatment* *Concrete base*				

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）	$1x10^6 \sim 10^9$	$3x10^7 \sim 10^9$
Volume resistance（Ω）	$5x10^6 \sim 10^9$	$6x10^7 \sim 10^9$
Applicable scenario	Workshops that require anti-static floors, such as electronics factories, chemical factories, laboratories, etc.	
Recommended product collocation	*Top Coating：UQESH® IF-EC 4-6mm* *Conductive ground grid* *Primer：UQESH® IF 1-2mm* *Concrete base*	*Top Coating：UQESH®HEFLOOR-EC cover* *Middle coating: epoxy self-leveling conductive layerConductive ground grid* *Putty layer: epoxy putty layer* *Primer: epoxy self-leveling primer* *Concrete base*

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

ISO9001-2015 ISO14001-2015

Sustainable quality assurance from Japan