



SUPERCRETE W200

1. INTRODUCTION

SUPERCRETE W200 is high performance polyurethane resin flooring system, supplied as three components in pre-measured packs for ease of on site mixing and use. The cured system forms a strong, easily, layer from 4mm up to 7mm thick.

2. USAGE

- Floor of factory
- Food production
- Warehousing and storage
- General heavy duty plant
- Parking lot(indoor)
- Pharmaceutical production

3. FEATURES

- **Expert application** - Installed only by trained and approved specialist contractors.
- **Colours** – Green, Grey, Brown and Yellow
- **Volume Solid** – Min. 99%
- **Recommended dry film thickness** – 4 ~ 7mm
- **Using Temperature** - 4mm(DFT) : -15°C to 60°C, 7mm(DFT) : -25°C to 60°C
- **Theoretical coverage** – 7.6kg/m²(4mm)
 - **Mix-ratio(wt)** – Part A : Part B : Part C = 3kg : 3kg : 14kg
 - **Dry time(25°C)** – 18hrs access to foot, 48hrs for vehicles.
- **Pot life(25°C)** – 12 ~ 15 mins
- **Recoatible(25°C)** – within 1 ~3 days
- **Shelf life** – 6 months(when stored indoors at 5~35°C)

4. SURFACE PREPARATION

- 1) At the time of installation of the SUPERCRETE W200 the substrate concrete should have a minimum tensile strength of 1.5 MPa, be more than 28days old and the surface should be dry.
- 2) Surface laitance must be removed by mechanical action ; suitable equipment includes recycled shot blasting equipment, concrete planers and diamond grinding.
- 3) Mechanical surface profiling is the method of surface penetration for both new and existing floors. Mechanically profile the floor to a minimum CSP 4 as described by the International Concrete Repair Institute.
- 4) Free of any dust, oil, grease and other bond-inhibiting materials.
- 5) Locking chases / Termination grooves must be present in the surface of the concrete within 75mm of all 'free edges'these may be cast into the surface or cut subsequently. 'Free Edges'includes all joints, column bases, perimeter walls, drainage channels, door thresholds etc. Joints are also required wherever movement is expected including adjacent to stainless steel channels, machine bases, around columns and at any construction joint in the substrate. Locking chases / Termination grooves are nominally square in section with each side twice the thickness of the floor.
- 6) Locking chases / Termination grooves should be included either side of all day joints in the substrate in preparation for a joint, should movement subsequently occur.
- 7) At soft joints subject to traffic and at channels, the chases should abut the joint, to provide extra protection to the arris against impact and to prevent the ingress of liquids under the floor in the event of sealant failure.

5. APPLICATION PROCEDURE

1.Environmental conditions

- 1) Air temperature: 5 ~ 30°C(Ideal application temperatures are 12°C to 25°C)
- 2) Surface temperature: 5 ~ 30°C
- 3) Relative humidity: up to 80%
- 4) The surface temperature must be at least 3°C above the dew point to prevent moisture condensation.
- 5) Substrate moisture : below 6%

2. Application Equipment

Trowel, rake, spike roller(for removing the bubbles)

3. Application

1) Storage

- 1-1) Materials should be stored under cover, out of direct sunlight. Part 3 must be raised off the floor and kept dry. Part 1 and Part 2 must be protected from temperature extremes.
(Ideal storage temperature : 15°C to 25°C)

2) First Coat(Scratch Coat Primer)

- 2-1) A 1mm scratch coat is preferred to ensure the substrate is completely sealed, especially on porous concrete to reduce resin absorption into the substrate and to aid application. Priming prevents air rising from the substrate(which could result in surface defects).
- 2-2) Mix the components Part 1 and Part 2 together for 1 minute with a slow speed drill and paddle to create a uniform dispersion and then gradually add the Part 3 aggregates while mixing continues for typically 3 –4 minutes
- 2-3) DO NOT mix more than two units at a time. Transport and discharge the mixed material on to the substrate as quickly as possible.
- 2-4) Pour all of the mixed SUPERCRETE W200 on to the floor immediately after mixing and spread by steel trowel to the correct thickness using the appropriate WFT gauge at the following coverage rates.(1mm : Approx 2.0 kg/m²)
All termination and anchor grooves cut in the concrete should be filled with the SUPERCRETE W200 Scratch Coat to ensure they do not grin through the subsequent finished SUPERCRETE W200 floor.
- 2-5) The scratch coat should be allowed to cure for minimum 18 hours and checked for any pinholes or blemishes and remedial action should be taken to ensure the surface is completely sealed.
- 2-6) Should the scratch coat be left for more than 48 hours, mechanical surface preparation will be required to produce a suitable surface for the application of the second coat

3) Second Coat(Body coat)

- 3-1 ~ 3-3) are the same procedure as 2-1 ~ 2-3)
- 3-4) Lightly spike roll the SUPERCRETE W200 with a spiked roller to assist flow and to release any trapped air. The main purpose of the spiked roller is to produce an even resinous surface.
In order to reduce the possibility of color and gloss variation, do not roll more than 100mm into the previous mix.

3-5) To ensure an even finish, the trowelling and spike rolling should be completed before the mix is more than 10 minutes old.

3-6) Expansion Joints in the SUPERCRETE W200 are best produced by saw cutting the material with a double bladed joint cutter after application and cure.

4) No Building Trades or traffic to be allowed on to the freshly laid SUPERCRETE W200 for at least 18 hours at 25°C, longer at lower temperatures.

4. Safety Precautions

1) Avoid contact with skin and eyes, and prolonged breathing of resin vapor

2) Keep adequate ventilation during application

3) Use the mixed paint within pot life(25°C, 12~15mins)

4) Do not mix with other paint products.

5) For flooring applications, the mixed materials should be applied the prepared and primed surface that should be rolled with a spike roller.

5. Warning notice

Please consult our enclosed here with warning notice.

6. Test Data

PROPERTY	UNIT	RESULTS	TEST METHODS
Flexural strength	N/mm ²	25.1	KS F 4041
Compressive strength	N/mm ²	53.3	KS F 4041
Adhesion	N/mm ²	2.2 (100% concrete failure)	KS F 4041
Hardness(D type)	-	84	ISO 868
Abrasion resistance (CS-17, 1000g, 1000cycles)	mg	45	ASTM D 4060
Abrasion resistance (H-22, 1000g, 1000cycles)	mg	1097	ASTM D 4060

7. CHEMICAL RESISTANCE

The following chart is the results of Supercrete W200 immersed in chemicals and tested as per ISO 2812-1. For 7 days deposit solution in room temperature.

Chemicals	농도(%)	Temp.(°C)	Resistance
Acetaldehyde	99.5%	20±3	RC
Acetic acid	99.0%	20±3	RC
Acidity detergent	-	20±3	R
Air fuel	-	20±3	R
Alkali detergent	-	20±3	R
Aluminum sulfate	50.0%	20±3	R
Ammonium hydroxide	28.0%	20±3	R
Ammonium nitrate	50.0%	20±3	R
Ammonium sulfate	50.0%	20±3	R
Amyl acetate	98.0%	20±3	R
Aniline	99.0%	20±3	R
Animal Fat	-	20±3	R
Boric acid solution	Saturation	20±3	R
Break liquid	-	20±3	NR
Butanol	99.0%	20±3	R
Calcium hypochlorite	Saturation	20±3	R
Calcium chloride	50.0%	20±3	R
Calcium hydroxide solution	Saturation	20±3	R
Caprolactam	50.0%	20±3	R
Carbon bisulfide	98.0%	20±3	R
Carbon tetrachloride	99.7%	20±3	R
Castor oil	99.0%	20±3	R
Chlorine water	Saturation	20±3	R
Chloroacetic acid	10.0%	20±3	R
Chromic acid	20.0%	20±3	RC
Chloroform	99.5%	20±3	R
Citric acid	60.0%	20±3	R
Cresol	98.0%	20±3	NR
Cyclohexane	99.0%	20±3	R
Denatured alcohol	95.0%	20±3	R

Chemicals	농도(%)	Temp.(°C)	Resistance
Diethylene glycol	99.0%	20±3	R
Engine oil(car)	-	20±3	R
Ethanol	-	20±3	R
Ethylene glycol	99.5%	20±3	R
Ethylene glycol acetate	97.0%	20±3	R
Formalin	40.0%	20±3	R
Formic acid	-	20±3	R
Fumaric acid	Saturation	20±3	R
Gallic acid	Saturation	20±3	R
Gasoline	-	20±3	R
Glycolic acid	70.0%	20±3	R
Hydrochloric acid	37.0%	20±3	RC
Hydrochloric acid	10.0%	20±3	R
Hydrogen peroxide	30.0%	20±3	R
Kerosene	-	20±3	R
Lactic acid	85.0%	20±3	R
Lauric acid	Saturation	20±3	R
Magnesium nitrate	50.0%	20±3	R
Maleic acid	Saturation	20±3	R
Malic acid	50.0%	20±3	R
Methacrylic acid	99.5%	20±3	R
Methanol	-	20±3	R
Methylene chloride	95.0%	20±3	R
Methyl ethyl ketone	99.0%	20±3	R
Methyl methacrylate	99.8%	20±3	R
Milk	-	20±3	R
Mineral oil	-	20±3	R
Monochlorobenzene	99.5%	20±3	R
N-hexane	95.0%	20±3	R
Nitric acid	65.0%	20±3	NR
Oleic acid	-	20±3	R
Oxalic acid	5.0%	20±3	R
Paraffin	-	20±3	R
Picric acid	Saturation	20±3	R
Phenol	5.0%	20±3	NR
Phosphoric acid	85.0%	20±3	R

Chemicals	농도(%)	Temp.(°C)	Resistance
Potassium dichromate	Saturation	20±3	R
Potassium hydroxide	Saturation	20±3	R
Potassium hydroxide	50.0%	20±3	R
Propylene glycol	99.0%	20±3	R
Salicylic acid solution	Saturation	20±3	NR
Sodium chlorate	Saturation	20±3	R
Sodium bicarbonate chloric acid	Saturation	20±3	R
Sodium hydroxide	50.0%	20±3	R
Sodium hypochlorite	10.0%	20±3	RC
Sodium hypochlorite	15.0%	20±3	RC
Stannic acid	Saturation	20±3	R
Stearic acid	-	20±3	R
Styrene	99.0%	20±3	R
Sugar solution	Saturation	20±3	R
Sulfuric acid	98.0%	20±3	NR
Tar oil	-	20±3	R
Tetrahydrofuran	99.5%	20±3	R
Toluene	99.5%	20±3	R
Trichlorobenzen	99.0%	20±3	R
Turpentine oil	-	20±3	R
Vegetable oil	-	20±3	R
White oil	-	20±3	R

R- Resistant

RC-Short term, Slight surface change, discolouration with no loss of hardness

NR-Not Resistant

8. Antifungus Test

1) Test method : ASTM G21

2) Test strain (mix)

- Aspergillus niger(ATCC 9642)
- Penicillium pinophilum(ATCC 11797)
- Chaetomium globosum(ATCC 6205)
- Glicocladium virens(ATCC 9645)
- Aureobasidium pullulans(ATCC 15233)

3) Judgment result

Observed Growth on Specimen	Rating
None	0
Traces of Growth(<10%)	1
Light Growth(10~30%)	2
Medium Growth(30~60%)	3
Heavy Growth(60~complete coverage)	4

4) Test result

	7 days	14 days	21 days	28 days
Specimen 1	0	0	0	0
Specimen 2	0	0	0	0
Specimen 3	0	0	0	0
Average	0	0	0	0