XIII、Technical Service

Fine Aggregate Concrete Floor

Fine aggregate concrete floor is characterized by good wear resistance, pressure resistance and seismic resistance. The construction method is to directly make 40-50 mm thick fine aggregate concrete on the cast-in-place structural layer. Among many ground foundation choices, fine aggregate concrete floor has the highest strength and is suitable for the foundation requirements of sports ground. It is recommended to use a laser leveling machine for construction.

A、Construction Preparation

(1)Material： ① Cement： Strength≥32.5MPa.
② Gravel： 3mm < Diameter < 15mm， and the mud content is less than 2%.
③ Coarse sand： The mud content is not more than 3%.
④ Proportion: Commercial concrete is preferred.
（C25）weight ratio concrete:sand:stone:water=1:2.4:3.6:0.65
（C30）weight ratio concrete:sand:stone:water=1:1.95:3.05:0.56
（C35）weight ratio concrete:sand:stone:water=1:1.49:2.54:0.4

(2)Tools： Concrete mixer, plate vibrator, wheelbarrow, 2-meter straightedge, bucket, iron roller, flat shovel, iron trowel, wood trowel, steel wire mesh, etc.

(3)Operation Conditions： The ground elevation has been measured. All kinds of pipelines on the ground have been buried. The wall body has measured the +50cm horizontal line.

B.Process Flow

Base Treatment ➤ Snap lines, plaster cakes and mark ridges ➤ Pour and tamp fine aggregate concrete ➤ Surfacing and polishing ➤ Maintenance

C.Operation Key Points

(1)Base treatment： The cushion layer should have a rough, clean and damp surface. Its compressive strength should not be less than 1.2 MPa, and there should be no ponding. The treatment method is to sweep away the dust on the base layer of the cushion layer, use a steel wire brush to clean the ash skin and ash layer, use a 10% caustic soda aqueous solution to brush off the oil stain on the base layer, and flush the alkali solution with clean water in time. For the base layer with a relatively smooth surface, it should be chiseled. The base layer after being washed with clean water must not be trampled on.

(2)Snap lines, plaster cakes and mark ridges： First, a horizontal reference line should be snapped on the surrounding walls, or wooden wedges can be nailed on the floor to measure the elevation standard line, which serves as the basis for measuring the elevation of the concrete surface layer. Usually, based on the ground elevation of ±0.00 and the +50 cm line on the wall, an ink line indicating the thickness of the fine aggregate concrete surface layer is snapped.

According to the horizontal reference line, 1:2 cement mortar plaster cakes are made at intervals of 1.5 - 2 meters around the corners of the walls, and standard ridges in the vertical and horizontal directions are made according to the height of the plaster cakes. The width is 8 - 10 cm. The height of the standard ridges is the thickness of the surface layer.

(3)Pour and tamp fine aggregate concrete:The strength grade of fine aggregate concrete is required to be not less than C20, and the slump should not be greater than 30 mm. Before spreading and plastering, first brush a layer of plain cement slurry with a water-cement ratio of 1:2 on the cushion layer as an interface treatment agent. The fine aggregate concrete can be laid immediately after brushing. Then, use a 2-meter-long straightening scraper to level along the standard ridges. Next, use a roller or plate vibrator to move back and forth and roll to level until the surface layer shows bleeding. After that, spread a layer of premixed cement sand (1:1 = cement:sand) mixture, about 5 mm thick. After the dry mortar absorbs water and gets soaked, level it with a straightedge. Then, smooth it with a wood trowel immediately.

(4)Surfacing and polishing:On the basis of smoothing with a wood trowel, immediately use an iron trowel to level and polish the depressions, sand holes and footprints on the surface layer. After the first polishing and water absorption, use the iron trowel to perform the second polishing in the order of from inside to outside. The third polishing should be completed before the final setting of cement. At normal temperature, the smoothing work of the surface layer should be completed before the initial setting of cement, and the polishing work should be completed before the final setting of cement. After polishing, the surface should have consistent color and luster and be free of trowel marks. The surface flatness is checked with a 2-meter straightedge and a wedge-shaped feeler gauge and should not be greater than 5 mm.

(5) Curing:After 24 hours of surface layer troweling, start watering for curing, not less than twice a day. The curing time should be not less than 7 days. After the compressive strength reaches 5 MPa, people are allowed to walk on it. After the compressive strength reaches the design requirements, it can be used normally.

Cement mortar ground

The construction method of cement mortar plastering for indoor ground is also a typical traditional construction method for integral ground surface layer. Due to its advantages of low cost, durability in use, and simple construction operation, it is widely used and should be proficiently mastered as a basic skill of plastering technology. It is suitable for small-area ground and sufficient strength should be ensured.

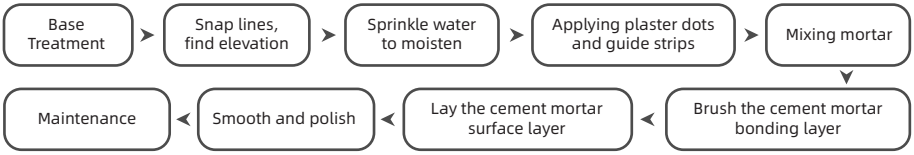
A、Construction Preparation

(1)Material preparation　Cement：Strength≥32.5MPa.
Coarse sand：The mud content is not more than 3%.

(2)Tools preparation:Mortar mixer, wheelbarrow, wooden bar, wooden trowel, iron trowel, spade, bucket, long-handled brush, wire brush, powder line bag, etc.

(3)Operating conditions:The ground elevation has been measured. All kinds of pipelines on the ground have been buried. The wall body has measured the +50cm horizontal line.

B.Process Flow



C.Key points of operation:

(1) Base treatment:The strength grade of the cushion base course is required to be not less than M15. The surface should be rough, clean, and moist without ponding. All floating ash, oil stains, and impurities must be removed respectively. The method is to first sweep away the dust on the base course, use a wire brush and chisel to clean or remove the mortar skin and slag layer, use a 10% caustic soda aqueous solution to brush off the oil stains on the base course, and flush the alkali water with clean water in time. The smooth surface of the base course should be roughened and flushed clean with clean water.

(2) Snap lines and find elevation：A horizontal reference line should be snapped on the surrounding walls first as the basis for determining the elevation of the cement mortar surface layer. The horizontal baseline is based on the ground ±0.00 elevation and the leveling point before wall building on the floor. Generally, it can be snapped on the wall at an elevation of 50 cm according to the situation. When snapping the accurate line, pay attention to snapping the line according to the thickness of the cement mortar surface layer required by the design. The thickness of the cement mortar should meet the design requirements and should not be less than 20mm.

(3) Sprinkle water to moisten:Generally, one day in advance, use a watering can to evenly sprinkle the ground base course once.

(4) Apply plaster dots and guide strips：According to the horizontal reference line, snap the horizontal reference line of the upper surface layer of the ground surface. For a room with a small area, the guide strips can be directly applied with a long straightedge bar according to the horizontal reference line. During construction, several remeasurements can be made. For larger rooms, according to the horizontal reference line, 1:2 cement mortar should be used to apply marker blocks (plaster dots) at intervals of 2.0m - 3.0m around the corners. The size is generally 8-10 cm square. After the plaster dots harden, use the height of the plaster dots to make vertical and horizontal full-length guide strips to control the thickness of the surface layer. The guide strips still use 1:2 cement mortar, and the width is generally 8-10 cm. The height of the guide strips is to control the plastering thickness of the cement mortar surface layer. And it should be consistent with the saw cut line of the door frame.

(5) Mixing mortar:The volume ratio of surface layer cement to mortar should be 1:2. The strength grade should not be less than M15, and the consistency should not be greater than 35mm. It is required to be uniformly mixed and have the same color.

(6) Brushing cement mortar bonding layer:That is, brushing cement slurry once with a water-cement ratio of 0.4-0.5. And before laying cement mortar, start laying surface layer mortar as the cement slurry is brushed. Don't brush too early or too much, otherwise it will not play the role of bonding the base course and the surface layer.

(7) Laying cement mortar surface layer:Immediately after brushing the cement slurry, lay cement mortar. Spread the mortar evenly between the guide strips, and then level it with a scraping bar according to the height of the guide strips. During operation, start from the inside to the outside and spread the mortar from front to back between two guide strips. After the mortar is spread and leveled by the scraping bar, the used guide strips are knocked off at the same time and filled with mortar. Finally, scrape from the inside of the room to the door and meet the elevation of the saw cut line of the door frame.

(8)Smoothing and polishing:After leveling the cement mortar on the ground with a scraping bar, immediately use a wooden trowel to smooth it, operating from the inside to the outside. At any time, use a 2-meter straightedge to check its flatness. After smoothing with a wooden trowel, press with an iron trowel for the first time until slurry appears. This first polishing process should be completed after the surface initially absorbs water and before the initial setting of cement. At this time, the leveling work should be completed before the initial setting of cement. When the water on the surface has subsided and when people step on it and there are footprints but no sinking occurs, press with an iron trowel for the second time. While pressing and smearing, fill and compact the depressions to achieve a flat and polished surface without missing any pressing. For the ground with partitioning requirements, after the first pressing, use a splitting tool to open the joints and use the tool to level and straighten the joints. After the second polishing, further use the tool to press and smooth to achieve the smoothest edges, clear joints, and smooth and straight joints. Conduct the third polishing before the final setting of cement mortar. It is required that there are no more trowel marks after using an iron trowel. All the marks on the surface layer should be leveled, compacted, and polished. This work must be completed before the final setting of cement mortar.
The surface layer of cement mortar ground needs three passes of polishing to achieve a satisfactory result. This requires proper timing for each pass of pressing. Since the final setting time of ordinary portland cement is not more than 2 hours, too late or too early polishing of the ground layer will affect the construction quality.
(9)Maintenance:After troweling and pressing the cement mortar surface layer, it should be cured under normal temperature and moist conditions. The curing should be carried out at the right time. For example, watering too early can cause peeling, and watering too late will reduce the strength of the surface layer and increase its drying shrinkage and cracking tendency. Generally, curing is carried out after 24 hours in summer and after 48 hours in spring and autumn. The curing time should not be less than 7 days. Only when the compressive strength reaches 5 MPa can people walk on it. Only when the compressive strength reaches the design requirements can it be used normally.

Construction process of cement-based self-leveling

(1) Arrangement of self-leveling construction personnel: Generally, there are 6 people in a group, including 2 people for moving materials, 2 people for mixing, 1 person for scraping self-leveling, and 1 person for degassing.
(2) As there are many self-leveling manufacturers at present, the formulas of various grades are different, and the water-cement ratio is also different. Therefore, we must strictly follow the requirements of each manufacturer for the water-cement ratio.
(3) First, pour an appropriate amount of clean water into the mixing bucket, and then pour the self-leveling cement into the bucket. Stir while pouring until it is uniform and without lumps (about 4 minutes). Stop stirring for about 2 minutes to allow the polymer material to fully mature. Stir again after the air escapes to form a flowable thin paste (about 1 minute). To ensure uniform mixing of self-leveling, a high-power (greater than 750 watts) low-speed (less than 600 revolutions/minute) electric drill with a special mixing head (12 cm in diameter) should be used for stirring.
(4) Too little water addition will affect fluidity. Too much water addition will cause quartz sand to sink to the bottom and cement powder to float, thus reducing the strength after curing and prolonging the curing time.
(5) Water addition amount: Since the specific gravity of water is 1:1, one liter of water is equal to one kilogram. Then, in addition to measuring with a graduated measuring instrument or measuring cup, we can also measure by weighing and convert by volume. The volume formula is: volume = base area × height.
(6) Pour the stirred self-leveling material onto the construction floor. It will flow by itself and level the ground. If the designed thickness is less than 4 millimeters, a self-leveling toothed scraper should be used to assist in controlling the required thickness. Retreat while constructing. Between the first scraper and the second scraper, there should be one-third or two-fifths overlap.
(7) Subsequently, the construction personnel put on special spiked shoes and enter the construction site. Use a self-leveling degassing roller to gently roll on the surface of the self-leveling. First, roll horizontally and then vertically. At the joints of the self-leveling, roll more to release the air mixed in during stirring and avoid air bubbles, pitted surfaces, and interface height differences. When the roller is in motion, it is forbidden to turn in place to avoid causing artificial dents.
(8) When the roller is close to walls, furniture, and other finished products, the speed should be slowed down to avoid splashing the slurry on the walls or furniture.
(9) During self-leveling construction, the site should be closed, doors and windows should be closed well to avoid strong winds and direct sunlight.

Note: Site protection
(1) Walking is prohibited within 5 hours after the completion of self-leveling construction, and heavy object impacts should be avoided within 10 hours.
(2) If fine grinding of self-leveling is required, it is advisable to carry out it 12 hours after the completion of self-leveling construction (select 80-mesh paper grinding discs). Other decorations should be carried out after 24 hours.
(3) In winter construction, surface decoration should be carried out after 48 hours.

FAQ & Solutions about bottom of foundation

A. Causes of ground sanding and powdering:
1)The water-cement ratio of cement mortar mixture is too large.
2)Do not understand or miss the initial setting time of cement, resulting in too early or too late timing for troweling.
3)Improper curing measures, too early start time of curing or insufficient curing days.
4)The ground has not reached the specified strength, and people walk on it too early.
5)The raw materials do not meet the requirements. The cement variety or strength grade is insufficient or damp and invalidated. Also, the sand particle size is too fine and the mud content exceeds the standard.
6)In winter construction, no antifreeze measures are taken, causing the cement mortar to freeze early.

Measures to prevent ground sanding and powdering:
1)Strictly control the water-cement ratio.
2)Master the initial and final setting times of cement and grasp the timing for troweling.
3)Comply with the measures and curing time for sprinkling water for curing.
4)Establish a system and arrange the construction flow to avoid people walking on the ground too early.
5)In winter, take technical measures to make the mortar reach the critical strength at positive temperature.
6)Strictly inspect the incoming materials and recheck the setting time and soundness of cement. Emphasize that the sand should be medium sand with a mud content not greater than 3%.

B.Causes of ground hollowing and cracking:
1)The base course is not cleaned thoroughly and there are still floating ash, slurry film or other dirt.
2)The base course is not watered enough and is too dry.
3)The bonding layer is brushed too early and has already dried and hardened.
4)The base course is not flat, resulting in uneven thickness of local mortar and inconsistent shrinkage.

Measures to prevent ground hollowing and cracking:
1)The base course treatment can only start the next process after strict inspection.
2)For the cement slurry of the bonding layer, it is emphasized to spread mortar immediately after brushing.
3)Ensure the flatness of the cushion layer and the uniform thickness of the spread mortar.

C. Repair of ground cracks
If there are a few cracks in the base course, the engineer should go to the site to determine the cause of the fracture cracks. If the cracks are structural stress cracks caused by problems of the structure itself, report to the general contractor and supervision, and together with professional structural reinforcement and design companies, study and repair the structure by strengthening and reinforcing.
If the cracks are non-structural stress cracks and are only cracks generated during the construction of the mortar leveling layer. For cracks smaller than 0.5mm, after treating the ground with a sandblasting machine, carefully inspect the ground and thoroughly clean the cracks with a vacuum cleaner. No additional repair work is needed. The interface agent used for self-leveling can seal the cracks.
For cracks larger than 0.5mm, the method of setting reinforcement bars in the vertical direction of the cracks is used to treat the cracks. First, cut the joints at intervals of 20cm - 30cm in the direction perpendicular to the cracks, with a depth of 2/3 of the cement mortar base course. Use a vacuum cleaner to suck out the dust in the gaps and place corrugated steel sheets at the cross cuts.
After fixation, pour two-component epoxy resin moisture-proof film with quartz sand or two-component silicone resin crack repair agent with quartz sand for treatment.

D. Repair of ground hollowing - grouting repair
Chisel out the hollow area and redo the leveling layer, but the cost is relatively high and the time-consuming will be long.
Use high compressive strength epoxy resin grouting treatment: drill holes on the ground, embed grouting pipes, and use a plunger high-pressure grouting pump to fill in two-component epoxy resin. Stop until epoxy resin overflows from the cracks. Simple epoxy resin grouting can very effectively solve the problem of ground hollowing in the base course.

E. Rapid repair method for low-strength ground
The ground leveling layer of buildings often shows phenomena of sanding and low strength. On such a low-strength base course, there is a risk in constructing any material. The low-strength base course needs to be treated to meet the installation requirements of facing materials. When the ground strength is insufficient and cannot meet the requirements of material installation, it must be repaired:
1)Penetration and curing with curing agent.
2)Epoxy resin sand throwing.

Construction process of composite and Homogeneous PVC

①Matte 15°PVC Standardized construction process

Construction process	Product information	Product structure	Composite PVC
		Thickness	2/3mm
		Width	2m
		Length	15m
		Surface treatment	UV
		Product characteristics	Fiber cloth backing layer has a small expansion coefficient and can be bonded with adhesive tape or water-based adhesive.
	Construction information	Joint treatment	Welding wire
		Basic requirements	≤Self-leveling
		Construction method	Full glue or adhesive tape
		Applicable glue	Water-based adhesive
		Modeling process	Inlay or ink
		Note	The material is suitable for various ground bases, including self-leveling, floor tiles, cement ground, and old rubber flooring.

	Description	Tools
A	1.Check the materials, review the construction drawings and construction requirements.	Construction drawings, goods list
B	1.Process the base ground, repair and level it. Grind the self-leveling ground; 2. Divide and snap lines on the ground.	Grinding machine, spatula, ink marker
C	1.Pre-lay the materials	Unwinder, ruler
D	1.Fix with glue spreading or adhesive tape. After spreading glue, exhaust air horizontally.	Scraper
E	1.Trim the seams and edges around.	Hook knife
F	1.Roll repeatedly with a 60-kilogram large pressure roller for air exhaust; 2.Groove the seams; 3. Weld the seams; 4. Level the welded seams.	Pressure roller, slotting machine, welding gun, spatula
G	1.Clean up; 2.Classify waste materials; 3.Take photos and videos and feed back to the company (horizontal screen).	Broom, garbage bag
H	1.Inspection and acceptance by Party A	Inspection form

All tool images


Grinding machine


Hook knife


Scraper


welding gun


Air Release Board


Broom


Pressure roller


Self-leveling tools


Welding wire


Glue


Masking tape


No-Nail Adhesive


Ink

Construction process of sports PVC

② Standardized construction process of sports PVC flooring

Construction process	Product information	Product structure	Composite PVC
		Thickness	3/4.5/6/8mm
		Width	1.8m
		Length	15m
		Surface treatment	Embossing (gemstone pattern, wood grain, cloth pattern, etc.), without UV. Customized UV is available.
		Product characteristics	Basketball, table tennis, and badminton courts are rich in elasticity, suitable for various foundations. However, they have poor stain resistance and are not easy to maintain.
	Construction information	Joint treatment	Welding wire
		Basic requirements	≤Self-leveling
		Construction method	Full glue or adhesive tape
		Applicable glue	Water-based adhesive
		Modeling process	ink
		Note	The material is suitable for various ground bases, including self-leveling, floor tiles, cement ground, and old rubber flooring.

	Description	Tools
A	1.Check the materials, review the construction drawings and construction requirements.	Construction drawings, goods list
B	1.Process the base ground, repair and level it. Grind the self-leveling ground； 2. Divide and snap lines on the ground.	Grinding machine, spatula, ink marker
C	1.Pre-lay the materials	Unwinder, ruler
D	1.Fix with glue spreading or adhesive tape. After spreading glue, exhaust air horizontally.	Scraper
E	1.Trim the seams and edges around.	Hook knife
F	1.Grooving at the joint.2.Welding wire at the joint.3.Leveling the welding wire.4.Applying masking tape.5,Drawing lines.	Slotting machine, welding gun, spatula
G	1.Clean up； 2.Classify waste materials； 3.Take photos and videos and feed back to the company (horizontal screen).	Broom, garbage bag
H	1.Inspection and acceptance by Party A	Inspection form

All tool images


Grinding machine


Hook knife


Scraper


welding gun


Air Release Board


Broom


Pressure roller


Self-leveling tools


Welding wire


Glue


Masking tape


No-Nail Adhesive


Ink

Standardized construction process of Transparent and Fraser Valley PVC

③Fraser Valley PVC Standardized construction process.

Construction process	Product information	Product structure	Composite PVC
		Thickness	2/3mm
		Width	2m
		Length	15m
		Surface treatment	UV
		Product characteristics	Fiber cloth backing layer has a small expansion coefficient and can be bonded with adhesive tape or water-based adhesive.
	Construction information	Joint treatment	Welding wire
		Basic requirements	≤Self-leveling
		Construction method	Full glue or adhesive tape
		Applicable glue	Water-based adhesive
		Modeling process	Inlay or ink
		Note	The material is suitable for various ground bases, including self-leveling, floor tiles, cement ground, and old rubber flooring.

	Description	Tools
A	1.Check the materials, review the construction drawings and construction requirements.	Construction drawings, goods list
B	1.Process the base ground, repair and level it. Grind the self-leveling ground; 2. Divide and snap lines on the ground.	Grinding machine, spatula, ink marker
C	1.Pre-lay the materials	Unwinder, ruler
D	1.Fix with glue spreading or adhesive tape. After spreading glue, exhaust air horizontally.	Scraper
E	1.Trim the seams and edges around.	Hook knife
F	1.Roll repeatedly with a 60-kilogram large pressure roller for air exhaust; 2.Groove the seams; 3. Weld the seams; 4. Level the welded seams.	Pressure roller, slotting machine, welding gun, spatula
G	1.Clean up; 2.Classify waste materials; 3.Take photos and videos and feed back to the company (horizontal screen).	Broom, garbage bag
H	1.Inspection and acceptance by Party A	Inspection form

All tool images


Grinding machine


Hook knife


Scraper


welding gun


Air Release Board


Broom


Pressure roller


Self-leveling tools


Welding wire


Glue


Masking tape


No-Nail Adhesive


Ink

RUBBER TILE (Base,Pro,Max) Standardized construction process

④ RUBBER TILE (Base,Pro,Max) Standardized construction process

Construction process	Product information	Product structure	Composite Rubber
		Thickness	20/25/30/40/50mm
		Specification	500*500mm 1000*1000mm
		Surface Thickness	base+pro1.8mm max 2.0mm
		Product characteristics	For rubber products, attention should be paid to the product direction during the construction process.
	Construction information	Joint treatment	Natural seam
		Basic requirements	≤Self-leveling
		Construction method	Clamp connection
		Applicable glue	None
		Modeling process	Ink printing
		Note	The material is suitable for various ground bases, including self-leveling, floor tiles, cement ground, and old rubber flooring.

	Description	Tools
A	1.Check materials, review construction drawings and construction requirements.	Construction drawings, goods list
B	1.The base ground is processed, repaired, leveled, and the self-leveling ground is polished.	Grinding machine, spatula, ink marker
C	1.Install edge strips for height differences.	Clamps, utility knife, ruler
D	1.Start from the outer end and connect the shock pad with clips inward.	Scraper
E	1.Trim the edges at the four ends.	Hook knife
F	1.Clean up; 2.Classify waste materials; 3.Take photos and videos and feed back to the company (horizontal screen).	Broom, garbage bag
G	1.Acceptance by the first party (Party A).	Acceptance form

All tool images


Grinding machine


Hook knife


Scraper


welding gun


Air Release Board


Broom


Pressure roller


Self-leveling tools


Welding wire


Glue


Masking tape


No-Nail Adhesive


Ink

RUBBER ROLL(RUBBER ROLL SBR+EPDM) Standardized construction process

⑤RUBBER ROLL(RUBBER ROLL SBR+EPDM) Standardized construction process

Construction process	Product information	Product structure	Single-layer structure
		Thickness	4-10mm
		Width	1.2m
		Length	Customized
		Surface treatment	None
		Product characteristics	Rubber products have a relatively large shrinkage coefficient.
	Construction information	Joint treatment	Tight joint
		Basic requirements	≤Self-leveling
		Construction method	Full glue
		Applicable glue	Double part adhesive
		Modeling process	Ink printing
		Note	The material can be made into double-layer or multi-layer on site

	Description	Tools
A	1.Check the materials and verify the construction drawings and construction requirements.	Material list, construction drawings
B	1.Process the base ground, repair and level it. Polish the self-leveling ground 2. Apply interface agent ; 3. After drying, snap lines and divide panels.	Grinding machine, spatula, mop, and ink marker
C	1.Pre-lay the materials (for more than 12 hours). At the joints, an overlap of 1 to 2 centimeters is required. Use a seamless push knife to handle the gaps (if the gap is more than 6 millimeters, there is no need for overlap and the edges need to be cut neatly and aligned). Use masking tape to make horizontal marks for easy alignment later after applying glue	Dispenser, tracked seamless push knife, masking tape, pen
D	1.Stir and mix the two-component glue. Use it up within 30 minutes. When applying glue, use an A2 scraper tooth.	Stirrer ,A2 scraper
E	1.After the glue adhesion meets the requirements, place the material longitudinally and make the marks made by masking tape coincide again.	None
F	1.Use a small pressure roller to repeatedly roll over the gaps to make the gaps within 30 silk. Use adhesive tape to tighten horizontally and remove it after 4 hours; 2. Use a 60-kilogram large pressure roller to repeatedly roll over to exhaust; 3. Trim the edges at the four weeks' ends	Small pressure roller, adhesive tape, largepressure roller
G	1.Clean up; 2.Classify waste materials; 3.Take photos and videos and feed back to the company (horizontal screen).	Broom and garbage
H	1.Inspection by Party A	Acceptance form

All tool images


Grinding machine


Hook knife


Scraper


welding gun


Air Release Board


Broom


Pressure roller


Self-leveling tools


Welding wire


Glue


Masking tape


No-Nail Adhesive


Ink

RUBBER MAT INTERLOCKING(RUBBER ROLLSBR+EPDM) Standardized construction process

⑥RUBBER MAT INTERLOCKING(RUBBER ROLLSBR+EPDM) Standardized construction process

Construction process	Product information	Product structure	Single-layer structure
		Thickness	4-10mm
		Specification	500*500mm 1000*1000mm
		Surface treatment	Can coated UV
		Product characteristics	Rubber products have a relatively large shrinkage coefficient.
	Construction information	Joint treatment	Tight joint
		Basic requirements	≤Self-leveling
		Construction method	Full glue
		Applicable glue	Double part adhesive
		Modeling process	Ink printing
		Note	Punch press molded product

	Description	Tools
A	1.Check the materials, review the construction drawings and construction requirements.	Material list, construction drawings
B	1.Process the base ground, repair and level it. Grind the self-leveling ground 2. Apply interface agent.3. After drying, snap lines and divide plates.	Grinding machine, spatula, mop, and ink marker
C	1.Pre-lay the materials (for more than 12 hours)	None
D	1.Stir and mix the two-component glue. Use it up within 30 minutes. When spreading the glue, use an A2 scraper tooth.	Stirrer ,A2 scraper
E	1.After the glue adhesion meets the requirements, carry out paving in the same direction in sequence.	None
F	1.Use a small pressure roller to repeatedly roll the gaps. Make the gaps within 30 silk. Use adhesive tape to tighten horizontally and vertically. Remove it after 4 hours ； 2. Use a 60-kilogram large pressure roller to repeatedly roll for exhausting ； 3. Trim the edges at the four weeks' ends.	Small pressure roller, adhesive tape, largepressure roller
G	1.Clean up ； 2.Classify waste materials ； 3.Take photos and videos and feed back to the company (horizontal screen).	Broom and garbage
H	1.Acceptance by the first (contract) party.	Acceptance form

All tool images


Grinding machine


Hook knife


Scraper


welding gun


Air Release Board


Broom


Pressure roller


Self-leveling tools


Welding wire


Glue


Masking tape


No-Nail Adhesive


Ink

RUBBER ROLL PLUS(RUBBER ROLL SBR+EPDM) Standardized construction process

⑦RUBBER ROLL PLUS(RUBBER ROLL SBR+EPDM) Standardized construction process			
Construction process	Product information	Product structure	Single-layer structure
		Thickness	4-10mm
		Width	1.2m
		Length	Customized
		Surface treatment	None
		Product characteristics	Rubber products have a relatively large shrinkage coefficient.
	Construction information	Joint treatment	Tight joint
		Basic requirements	≤Self-leveling
		Construction method	Full glue
		Applicable glue	Double part adhesive
		Modeling process	Ink printing
		Note	The material can be made into double-layer or multi-layer on site

	Description	Tools
A	1.Check the materials and verify the construction drawings and construction requirements.	Material list, construction drawings
B	1.Process the base ground, repair and level it. Polish the self-leveling ground 2. Apply interface agent ; 3. After drying, snap lines and divide panels.	Grinding machine, spatula, mop, and ink marker
C	1.Pre-lay the materials (for more than 12 hours). At the joints, an overlap of 1 to 2 centimeters is required. Use a seamless push knife to handle the gaps (if the gap is more than 6 millimeters, there is no need for overlap and the edges need to be cut neatly and aligned). Use masking tape to make horizontal marks for easy alignment later after applying glue	Dispenser, tracked seamless push knife, masking tape, pen
D	1.Stir and mix the two-component glue. Use it up within 30 minutes. When applying glue, use an A2 scraper tooth.	Stirrer ,A2 scraper
E	1.After the glue adhesion meets the requirements, place the material longitudinally and make the marks made by masking tape coincide again.	None
F	1.Use a small pressure roller to repeatedly roll over the gaps to make the gaps within 30 silk. Use adhesive tape to tighten horizontally and remove it after 4 hours; 2. Use a 60-kilogram large pressure roller to repeatedly roll over to exhaust; 3. Trim the edges at the four weeks' ends	Small pressure roller, adhesive tape, largepressure roller
G	1.Clean up; 2.Classify waste materials; 3.Take photos and videos and feed back to the company (horizontal screen).	Broom and garbage
H	1.Inspection by Party A	Acceptance form

All tool images


Grinding machine


Hook knife


Scraper


welding gun


Air Release Board


Broom


Pressure roller


Self-leveling tools


Welding wire


Glue


Masking tape


No-Nail Adhesive


Ink

TURF Standardized construction process

④ RUBBER TILE (Base,Pro,Max) Standardized construction process

Construction process	Product information	Product structure	Single-layer structure
		Thickness	16mm
		Specification	Customized width、Customized length
		Surface Thickness	SBR self-adhesive,PU adhesive
		Product characteristics	
	Construction information	Joint treatment	Tight joint
		Basic requirements	≤Self-leveling
		Construction method	Full glue
		Applicable glue	Double part adhesive
		Modeling process	Interwoven
		Note	The material is suitable for various ground bases, including self-leveling, floor tiles, cement ground, and old rubber flooring.

	Description	Tools
A	1.Check the materials, review the construction drawings and construction requirements. -	Material list , construction drawings
B	1.Process the base ground, repair and level it. Grind the self-leveling ground. 2. Apply interface agent.3. After drying, snap lines and divide plates.	Grinding machine, spatula, mop, and ink marker
C	1.Installation Tack Strip.	Clips,Utility knife,ruler
D	1.Start from the outer end to inward.	Clips,Utility knife
E	1.Trim the edges at the four ends.	Utility knife, ruler
F	1.Clean up; 2.Classify waste materials; 3.Take photos and videos and feed back to the company (horizontal screen).	Broom, garbage bag
G	1.Acceptance by the first (contract) party.	Acceptance form

All tool images


Grinding machine


Hook knife


Scraper


welding gun


Air Release Board


Broom


Pressure roller


Self-leveling tools


Welding wire


Glue


Masking tape


No-Nail Adhesive


Ink