

THE FLOORS THROUGHOUT THE WORLD



&



ARE COVERED WITH THE APPROVED  
ZENGER-DESIGNED  
SPECIAL MONOBLOCK ANTI-STATIC AND ANTI-BACTERIAL  
RUBBER FLOORINGS!



w w w . z e n g e r t e k n i k . c o m



## ZENGER MONO BLOCK ANTI-STATIC AND ANTI-BACTERIAL RUBBER FLOOR COVERINGS

Interlocked and plug-in type monoblock:

As it is protective, flexible and impact-absorber, and prevents the injuries due to falling down or any impact, it is the best product that may be chosen particularly for the playgrounds. It is much more hygienic and healthier compared to the sand. Thanks to its outstanding drainage capability, it avoids any puddles, even after the heavy rainfall. It provides a dry and non-skid flooring. It provides ease of cleaning; it can be easily cleaned after raining or with water. It is a long-lasting product, and it is easily repairable, as it can be disassembled, when necessary. It is an extraordinarily abrasion- and impact-proof product as well as being flexible. It is a material providing extreme walking comfort that decreases the loss of energy and hence, it does not get someone tired. It provides thermal and acoustic insulation. As it is an UV-resistant product, no deformation will be seen due to the low and high temperatures. It can be safely used in locations which have low temperatures and snowfall. It provides a smooth surface which does not have any hollows and ridges that may lead to stumble. It is a non-combustible product; contrary to the similar products, it prevents the growth of any insects, etc. on the surface where it is applied, thanks to its anti-bacterial action.

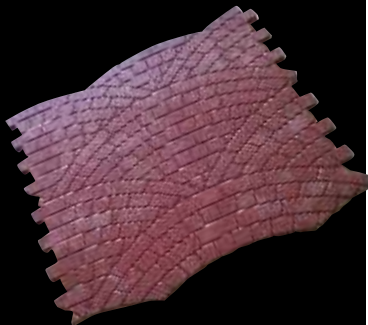
Interlocked and plug-in type monoblock:

The surface is prepared at first, after such product features as shape, thickness, color and model, etc. are determined.

After a level and smooth surface is achieved, the adhesive is applied to the concrete surface with a flooring rake at a ratio of approx. 0,85 kg per square meter, and the floor is begun to be covered by aligning the blocks on the surface. The adhesive should be applied and the floor should be covered with the blocks in 5-7 m long rows. For the use of the rubber material with an egg-shape backspace, the fine sand is applied onto the compacted and leveled soil surface as a screed and therefore, the material can be applied directly onto this screed without using adhesive. The detailed technical information about the application of the material will be provided following to your order. The rubber floor covering material to be used on the floor of the playgrounds will have been manufactured in square shape with 400 x 400 mm dimensions. With its high UV-resistance, the rubber flooring material should be manufactured by compressing the powder coat (mustard green, tile red or black) with 3/5 mesh granulated rubber pieces with special adhesives under high pressure and at a high temperature. It should not contain any rubber clippings as fine and long rasps in it. The top edges of the rubber paving blocks will be beveled out so as to form joints. The flooring material should be 20/40 mm thick. The rubber material should have minimum 5mm high round and square blisters at its backside so that it provides drainage and better adhesion onto the surface. The rubber flooring material will be applied onto the concrete and screed surface prepared by the Administration by means of the special polyurethane sealant. The amount of adhesive to be applied onto the surface shall not be less than 0.500 kg per square meter. The rubber material should be so flexible that it can be folded in two. The points where the pipes of the combination playground structures intersecting with the surface are cut off and the spaces between the pipes and the floor coverings should not exceed 10 mm.

- IT IS USED FOR COVERING THE FLOORS OF CAR PARKS, MANUFACTURING PLANTS, HOSPITALS AND STORAGE AREAS.
- WE HAVE APPLICATIONS INTENDED FOR THOSE AREAS OF USE.

OUR BOTH DOMESTIC AND INTERNATIONAL REFERENCES ARE AVAILABLE IN OUR WEB PAGES.



## ZENGER MONO BLOCK ANTI-STATIC AND ANTI-BACTERIAL RUBBER FLOOR COVERINGS

### Advantages of Rubber Flooring Materials and their Superiority to Other Materials:

4cm Non-combustible Anti-static and Anti-bacterial interlocked and plug-in type Monoblock with a 10-year Guarantee: As it provides thermal and acoustic insulation, and it is protective, flexible and impact-absorber, and prevents the injuries due to falling down or any impact, it is the best material that may be chosen particularly for the sports and play grounds.

It is a non-combustible material as it consists of iron oxide color, boron, carborundum, carbon fiber and glass fiber reinforced components as raw materials.

It will have no deformation and loss of resistance in extreme hot (+55°C) and extreme cold (-45°C) environments. It is not covered with snow and ice, and it has a maximum 5 mm margin of flexibility and a maximum 5 mm margin of abrasion.

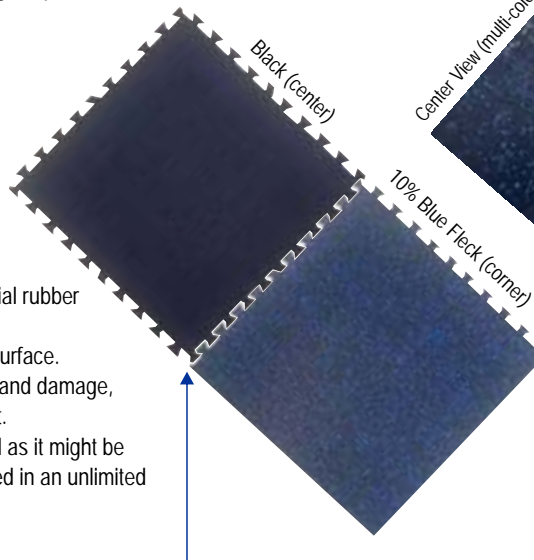
- It has achieved the results of non-combustibility and non-flammability as clearly defined in the results of Internationally Accredited testing labs of TUBITAK/YTU.
- It is anti-static and resistant against 5000 kaw electric current as clearly defined in the results of Internationally Accredited testing labs of TUBITAK/YTU.
- It is anti-bacterial and prevents the insects, etc. on the surface that may arise based on the humidity in the environment where it is applied, as clearly defined in the results of Internationally Accredited testing labs of TUBITAK/YTU.
- It is a impact-absorber material with 50/70 shore value and it prevents the impacts higher than 270 cm on the surface where it is applied, as clearly defined in the results of Internationally Accredited testing labs of TUBITAK/YTU.
- It provides acoustic and thermal insulation, as clearly defined in the results of Internationally Accredited testing labs of TUBITAK/YTU.
- It is quickly applied, as it has special patented interlocking and monoblock features with a registered design, and as it can be interlocked, it is not twisted and has a 10 year/5mm margin of abrasion as clearly defined in the results of Internationally Accredited testing labs of ITU/TUBITAK/YTU.

### AREAS OF USE FOR 4CM MONOBLOCK RUBBER FLOOR COVERINGS

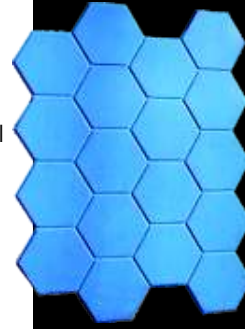
Car parks which has light vehicle and heavy passenger traffics,  
 Heavy industry plants and manufacturing plant sites with a large area including tracked and trackless vehicle traffic,  
 Roof and floor insulations,  
 Power generation and distribution plants,  
 Chemical product manufacturing and filling plants,  
 Pedestrian overpass and underpass floors with heavy passenger traffic,  
 Sports and play grounds where requires high impact-absorber materials,  
 Fuel storage spaces

### ZENGER MONO BLOCK ANTI-STATIC AND ANTI-BACTERIAL RUBBER FLOOR COVERINGS

Non-combustible anti-static and anti-bacterial rubber floor coverings provide unique level of smoothness and impact-absorbing on the surface. It is resistant against fading, cigarette burn and damage, and it is an environmentally friendly product. It can be used as flooring, tile or board, and as it might be expected, it is really flexible and can be used in an unlimited amount.



#### BLOCK HONEYCOMB



300x130 (cm)

#### BLOCK PUZZLE



70x100 (cm)

#### BLOCK PURLIN STONE



300x130 (cm)

THE JOINT GAPS THAT MAY BE 1 MM MAXIMUM AT THE JOINTS CAN BE FILLED WITH SEALANT AND LEVELED WITH POLYURETHANE TO ACHIEVE A UNIFORM SURFACE, IF REQUIRED.



\* THE TECHNICAL AND CHEMICAL PRODUCT SPECIFICATIONS TO BE APPLIED BEFORE THE APPLICATION OF PRODUCT ARE AVAILABLE IN OUR TECHNICAL SPECIFICATIONS.

## ZENGER MONO BLOCK ANTI-STATIC AND ANTI-BACTERIAL RUBBER FLOOR COVERINGS

### EPDM FLOORING

Economic, Multi-purpose, Water-permeable Play Ground Flooring

It is a cost-effective, multi-purpose flooring system that can be used for all sports, training and play grounds.

As this polyurethane and rubber-based system has high elasticity, resistance and cleats-resistance, it also provides economic solutions for the tracks for national athletic contests. It does not require any maintenance. As it is permeable to water, it allows playing on the ground immediately after rain.

Applied in 10 mm thick three layers with special finishing and spraying machines, this system can be applied in different thicknesses based on the specifications and the required performance. The finishing machine used for application provides an even thickness and smooth surface all over the ground.

### AREAS OF USE

It is a multi-purpose flooring system that can be used for a broad range of sports ranging from tennis, basketball, volleyball, football and other ball games to the athletic contests as well as for playgrounds. This polyurethane- and EPDM rubber-based system is highly resistant against abrasion. The muscles will not get stiffened thanks to its properties such as high elasticity and impact-cushioning and enables the athletes to get less tired.

It does not require any maintenance. As it is permeable to water, it allows playing on the ground immediately after rain. Applied in 10 mm thick three layers with special finishing and spraying machines, this system can be applied in different thicknesses based on the specifications and the required performance. The finishing machine used for application provides an even thickness and smooth surface all over the ground.

### OVER-TARTAN EPDM FLOORING

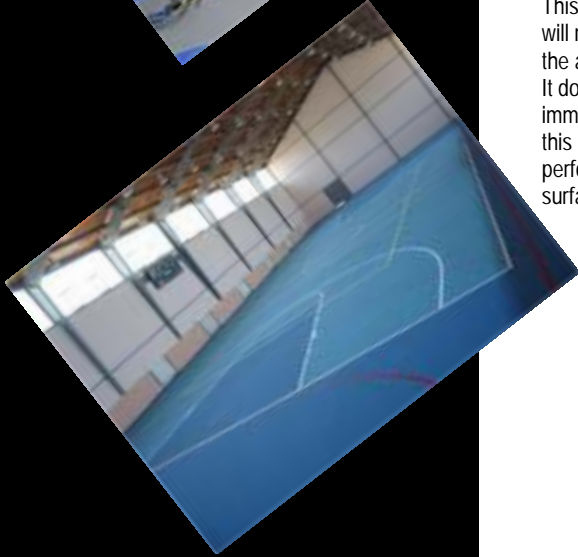
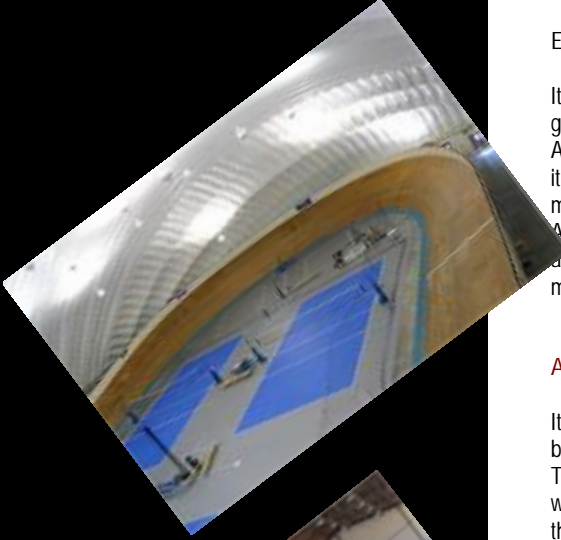
It is a synthetic flooring system for sports ground which is permeable to water, flexible, suitable for sports health and has a high level of cleats-resistance. It is a two-layer flooring system applicable 15 mm thick in total. Its 8 mm thick lower layer consists of the mixture of original SBR rubber granules and polyurethane sealant, and 7 mm thick upper layer consists of the mixture of color and high UV-resistant EPDM rubber granules and single-component polyurethane sealant.

Intended use :

It is suitable for use in the floors of indoor and outdoor tennis courts, basketball and volleyball courts, athletics tracks as well as all indoor sports and play grounds.

Properties

It is a flooring system in accordance with DIN 18035 standard. This EPDM- and rubber-based system has such properties as abrasion-resistance and impact-cushioning.



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## ZENGER MONO BLOCK ANTI-STATIC AND ANTI-BACTERIAL RUBBER FLOOR COVERINGS

### Granulated Rubber (SBR)

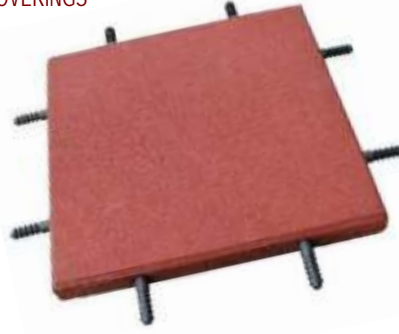
The granulated rubbers are mostly used in car tires consisting of isoprene or butadiene. ( NR; IR; SBR; CBR; NBR ). For car tires to turn into tiny granules, the physical methods are used (cutting with knives). These rubber particles are likely to be used as a cost-cutting measure, especially as with such thick rubber pieces as carbon black. The raw elastomer is bound to the granulated rubber pieces by means of sulfur vulcanization. The binding will be achieved more successfully, especially with the rubbers where less chemicals closing the cross links called ozone wax or anti-oxidant are used. Homogenization is likely to occur for the granule itself; that's, there will be seen uniform differentiation everywhere. However, it is unlikely to separate only the SBR from the car tire. CBR, butyl and natural rubber is strictly required to have in the mixture.

Intended use of granulated rubber:

- \* Tennis Courts - Golf - Football – Basketball Courts
- \* Artificial Turf
- \* Decoration – Decorative Turf
- \* Rubber Shoes and Boots
- \* Rubber Soles and Heels Manufacturing
- \* It is used in automotive industry for manufacturing Tight Wheel, Brake and Clutch Linings; Friction Plates, Rubber Seals and Mountings.

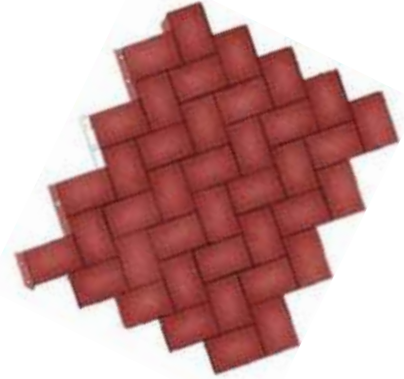
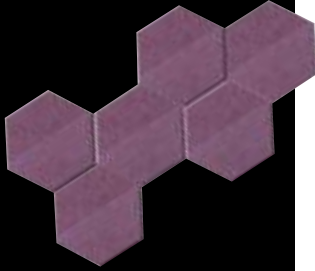


## ZENGER MONO BLOCK ANTI-STATIC AND ANTI-BACTERIAL RUBBER FLOOR COVERINGS



Interlocked and plug-in type Zen monoblock is a rubber-based flooring type consisting of granules and polymer materials applicable to all spaces where required smoothness and aesthetical view.

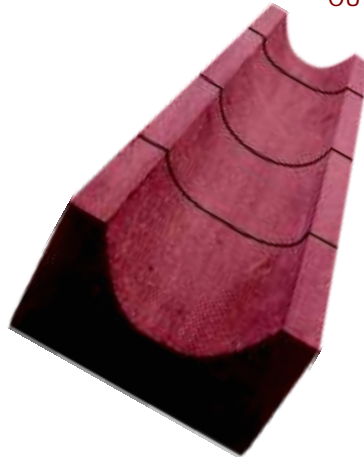
Intended use: It is used for race tracks, playgrounds, parks, fitness grounds, kindergartens, car parks and main entrances, pool sides and sports grounds (including basketball, volleyball, football and tennis courts) indoor and outdoor spaces, shooting ranges, animal pads, horse paddocks, inside and floors of the stud farms. The impact-absorber rubber floor coverings provides suspension in any color and pattern and has a high abrasion-resistance and is reinforced with the anti-oxidants against fading and has a flexible structure resistant against the external weather conditions.



IT IS SUITABLE FOR USE IN FUEL STORAGE SPACES, CAR PARKS WITH LIGHT VEHICLE AND HEAVY PASSENGER TRAFFICS AS WELL AS PASSENGER UNDER- AND OVER-PASSES.



TECHNICAL SPECIFICATIONS :  
OUTDOOR SPORTS GROUNDS:



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## ZENGER MONO BLOCK ANTI-STATIC AND ANTI-BACTERIAL RUBBER FLOOR COVERINGS

### TECHNICAL SPECIFICATIONS :

#### OUTDOOR SPORTS GROUNDS:

SBR granules are economically preferred for flooring in the race tracks, small spaces, tennis courts and other outdoor sports grounds.

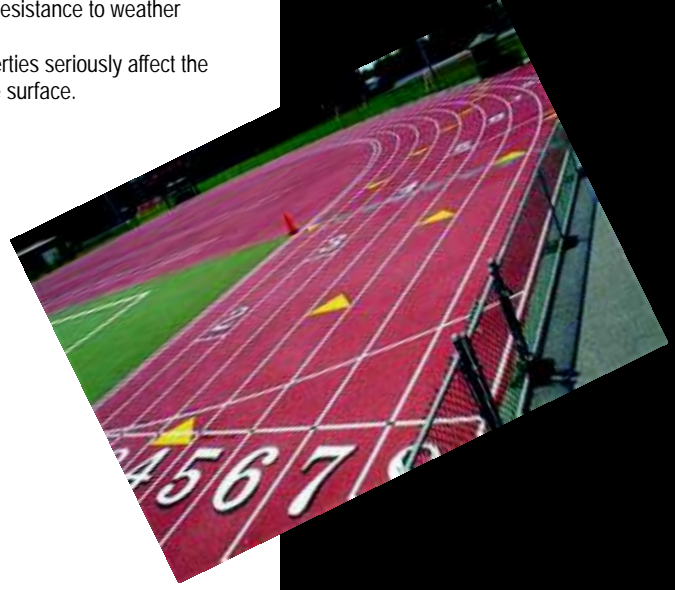
#### WHICH PROPERTIES ARE OF IMPORTANCE FOR SBR GRANULES? :

As these products are used outdoors, the most important feature is their resistance to weather conditions.

Other important properties are its resistance and elongation. These properties seriously affect the PU-based binding system. Elasticity is needed to prevent the tears on the surface.

#### AREAS OF USE :

- Floors of Indoor Sports Facilities,
- Synthetic Pitch Grounds,
- Tartan Track Grounds,
- Asphalt Pavement,
- Walkways,
- Playgrounds,
- Fitness Grounds,
- Horse Paddocks, Stud farms and Walkways,
- Breeding Farms,
- Cycle Tracks,
- Roller Skating Grounds,
- Recreation areas.



## APPROVED ZENGER MONO BLOCK ANTI-STATIC AND ANTI-BACTERIAL RUBBER FLOOR COVERINGS

### HOW TO APPLY RUBBER FLOOR COVERING?

For leveled and prepared floor:

1. A work program has been scheduled previously for the places where the rubber floor coverings are to be applied. The ground where the floor coverings are to be applied should be evacuated by all the other contractors.
2. If the ground where the floor coverings are to be applied is uneven, or requires screed on it, then screed should be laid down on the ground based on the roughness level of the ground.
  - a. The ground to be applied with screed, thick and deep hollows and rough spaces should be repaired with concrete screed.
  - b. Lubricants, dirt and similar things should be removed from the ground where the screed is to be applied, and the undercoat (primer) should be applied by using 100-150 gram per square meter. For tiles and non-absorbant surfaces, neoprene primer should be used.
  - c. As the screed consumption is 1.5 kilograms per 1 Millimeter in 1 square meter:-  
EXAMPLE : (For a ground where three millimeter thick screed is to be applied, an amount of 4.5 kg screed is used per square meter.)
  - d. As screed is available in 25 kg bags, 6.5 – 7 liters of water should be added for each bag. It is stirred up with a 600-cycle per minute driller until the knobs are totally removed, and it is stirred again after waiting 5-10 minutes for the screed to settle, and then it is applied.
  - e. The troweling traces, bubbles and other traces will be removed off with a spiked roller immediately after the screed is applied.
  - f. The screed should be left for drying based on the ambient temperature and the brand of the screed. Average dry time is 12 hours.
  - g. It will be scoured with a 200 cycles/minute scouring machine after completely drying, and then prepared for flooring.
3. All the dust remaining after scouring should be removed and cleaned completely before covering the floor. If there is a detailed project for flooring in the locations where the floor is to be covered, the application details will be prepared in accordance with this project, and if not, the application details will be determined and prepared on-site by the authorities. Accordingly, the alignment, form, or possible edges will be determined and marked.
  - a. In places where rubber floor coverings are to be applied, the mean temperature level should be between 18°C and 25°C. For floor heating systems, the heating operation should be activated 10 days before, and should be switched off during application. The system can be re-started within 72 hours after the application. The floor temperature should not exceed +22°C.
  - b. If the floor (e.g. pool) is covered rotating coverings, the walls are primarily (mortarboard, slab for bearing) marked with a leveling line corresponding to the thickness of skirting board, and then adhesive is applied.
  - c. After the skirting board is installed, outer corners are cut at an angle of 45 degree , and the middle of it is carved with inner corner chisel and then it is attached to the outer corners with adhesive.
4. The material is laid down primarily on the walkway from the door entrance to directly the opposite way based on the dimensions, after the space is re-cleaned.
  - a. The material is laid down by cutting 5 cm more than the clear dimensions, The margins should be cut by leaving a 5 cm space from the wall, after the material is completely attached.





## APPROVED ZENGER MONO BLOCK ANTI-STATIC AND ANTI-BACTERIAL RUBBER FLOOR COVERINGS

- b. The material is folded into equal halves and attached with the help of adhesive. The amount of adhesive to be used should be 300-350 grams and applied with an A3 or B1 notched trowel.
  - c. The adhesive is left to have the consistency of gum. The average dry time is 10-15 minutes based on the ambient temperature and floor. The rate of adhesive is m<sup>2</sup>/550gr.
  - d. The material is attached with adhesive, and if the rotating floor covering is applied, the margins are cut at the same level as the mortarboard and then inserted underneath the skirting board with a screwdriver.
  - e. Ensure that the material is completely fixed with a roller, after the material the material is completely attached with adhesive, and all air bubbles is removed.
5. The joints are opened with a 1600-cycle joint-cutter before starting welding. As there is always a 10 cm space between the joint-cutter and the baseboard, the remaining edges and rotating joints are cutted with a utility knife.
- a. 6- or 7-degree straight welding is applied at first, and then scraping is applied; the material is scraped for once or twice based on the brand or the quality of the material.
  - b. Rotating welds are applied at 3rd or 4th degrees based on the brand and quality of the material and the outer corners are scraped with a utility knife and the inner corners are scraped with an inner corner chisel.
  - c. The most important process in the rubber floor covering is welding. One should be extremely cautious and careful.
5. Final cleaning process is completed and it is delivered to the user.
6. One can carry more than 10.000 volts static electricity on his/her body. This electrical load, particularly in some spaces, creates an unpleasant sense on people. It damages to the sensitive devices. For example; it will shorten the lifecycle of the sensitive electronic devices and the measuring devices will begin to give wrong results.

*The most important way to avoid this undesired condition in sensitive places is to choose the right material for floors. If the chosen flooring material has low electrical resistance (if it easily conducts electricity), the undesired static electricity is conducted to the ground. Hence, the operating rooms, labs, systems and computer rooms, electronics industry, explosives manufacturing plants, petrochemicals industry; in brief, one should be very careful while choosing the flooring material in all those special places which have sensitive electronic devices.*





## WHY TO CHOOSE MONOBLOCK RUBBER FLOOR COVERING?

High level of flexibility

- Provides fast and easy flooring
- Prevents the formation of puddles
- Ease of maintenance
- Allows making additions
- Typical combinable form
- Non-combustible material
- Provides acoustic and thermal insulation
- Long-life
- Protects joints and ligaments
- Provides non-skid material
- Suitable for use under all weather conditions
- Acts as an impact-absorber in sharp falls
- Made of ecologically recyclable material
- Installed on asphalt or concrete

### ZENGER MONO BLOCK ANTI-STATIC AND ANTI-BACTERIAL RUBBER FLOOR COVERINGS



#### ■ *Technical Specifications*

Zenger Monoblock is a non-skid material.

#### ■ Zenger Monoblock prevents skidding on wet and sloped surfaces.

#### ■ *Abrasion-proof*

Zenger Monoblock is abrasion-proof. It is resistant against the heavy and continuous use than all the other flooring coverings and it has a long-life.

#### ■ *Insulating*

Zenger Monoblock provides excellent solutions for insulation problems by achieving maximum insulation, as it features as sound- and impact-absorber.

#### ■ *Economical*

Zenger Monoblock provides significant cost-effectiveness in bearing systems, as it leads to the significant decreases of load on the structures for general use on the basis of projects.

#### ■ Decreases Falling Impact and Prevents Injuries Zenger Monoblock minimizes the injuries as a result of falling than the other types of surfaces, thanks to its impact-absorbing feature.

#### ■ *Proper for Use in Sports Activities*

Zenger Monoblock can be comfortably used in all kinds of sports activities, as it expands its ball bouncing features equally to the entire floor.

#### ■ *Prevents Muscle Fatigue*

Zenger Monoblocks prevents muscle and joint fatigues in walking and other activities, with its adjustable hardness.

#### ■ *Durable*

Zenger Monoblocks are not broken, ruptured and not affected from light acids and chemicals like cigarette light and seasonal swings.

#### ■ *Non-wettable and Dry Surface*

Zenger Monoblock keeps its surface dry all the time, thanks to the grooves properly designed to penetrate the water underneath.

#### ■ *Easy to clean*

Zenger Monoblocks are easily cleaned and maintenance-free. You will simply cover the floors and then forget.

#### ■ *Aesthetic and Decorative*

Zenger Monoblock is used in a variety of landscaping applications thanks to its UV-resistance and such flooring types as EPDM flooring, EPDM and SBR pouring.

#### ■ *Environmentally-friendly*

Zenger Monoblocks does not include any carcinogens. It does not have any environmentally hazardous substances in its content.

#### ■ *Fire-proof*

Zenger Monoblock is a non-combustible material, thanks to its such components as iron oxide paint, boron, carborundum, carbon fiber and glass fiber reinforced components as raw materials.

#### ■ It is ice-free and non-skid.

#### ■ It provides impact sound and thermal insulation against the moisture and external conditions.

#### ■ It is anti-static and anti-bacterial.



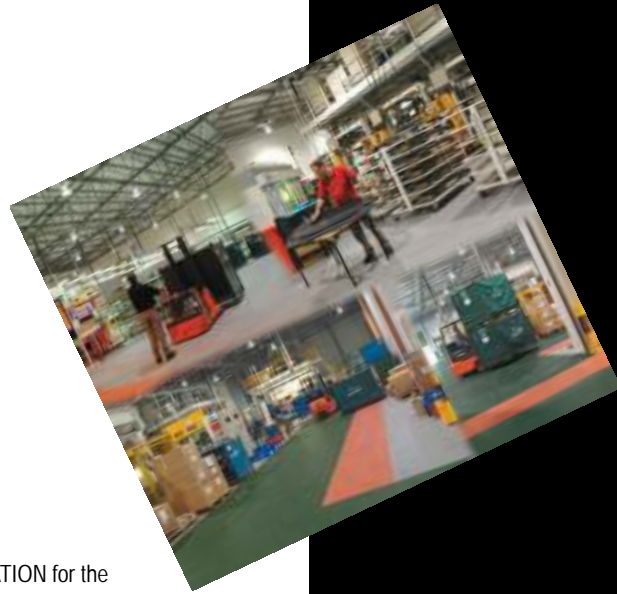
## ZENGER MONO BLOCK ANTI-STATIC AND ANTI-BACTERIAL RUBBER FLOOR COVERINGS

The mission of Zenger Teknik is to supply the quality rubber flooring to the consumer at competitive prices. The rubber floorings are as durable as to stay resistant under the harshest conditions, including commercial halls and large-scale weight lifting rooms, and they are an excellent choice easily applicable to install exercise rooms at home, or to protect the floors. As Zenger Teknik, we provide flooring products for you in a broad range of colors and sizes. A 10-year guarantee is included for the rubber flooring systems and recyclable rubber mats. As the primary raw material used in rubber flooring production is 100% post-consumption material obtained from recycled rubbers, the most important feature of the product is to be an environmentally-friendly product at cost-effective prices.

Interlocked and plug-in type monoblock removable flooring systems are ideal for heavy traffic, as they keep the car and heavy truck wheels under strong pressure and firm. This removable system can be used for different applications such as the floors of parking garages, office spaces, industrial warehouses, sports centers and playgrounds. As a more resistant material to abrasion and wearing than the other alternatives such as laminated floors, or carpets, this client's removable floors have proven to be an excellent investment. It has a broad range of colors including black, grey, red, green, beige, blue, and orange.

### GARAGE FLOORS

As it is seen, these tiles are ideal for the garage floors. These pvc tiles provides an excellent way for a garage, and eliminated the problems such as painting.



### WAREHOUSE FLOORS

You can enjoy several advantages it provides such as EASE OF INSTALLATION for the companies in both small and large warehouse operations.

It will cover a whole area within a few minutes without need to any special skills or any vehicle. To accelerate the process, the tiles can be located with the help of a rubber hammer as shown in the figure above. It will be applied to a 20 square meter area within approx. 2 hours or less with the help of 20 feet and a little effort. A simple interlocking mechanism is so powerful to prevent any skidding. It requires glue, or a special adhesive to be fixed.



TÜRK PATENT ENSTİTÜSÜ

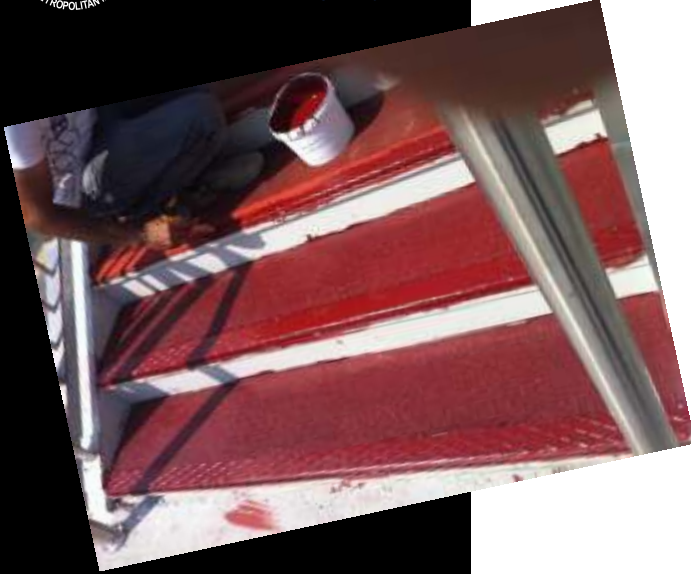


ISO 9001  
LL-C (Certification)

ISO 14001  
LL-C (Certification)

OHSAS 18001  
LL-C (Certification)

## ZENGER MONO BLOCK ANTI-STATIC AND ANTI-BACTERIAL RUBBER FLOOR COVERINGS



### Rubber Stairs

As it is a protective, impact-absorber and flexible material, it is a kind of product that prevents the injuries in cases of falling in playgrounds and other areas of use. It provides a cleaner and more hygienic floor than the sand and other playground flooring materials. It can be easily cleaned after rain, or with water. As it is demountable, it provides ease of repair and maintenance. It provides ease of walking, when used in walkways. As it does not absorb energy and provides comfort, it is recommended to be used in walkways, as well.

### Intended use:

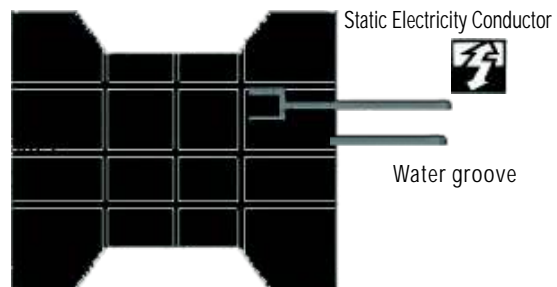
For covering the concrete and sheet metal stairs.  
Stairs on board  
Stairs inside the manufacturing plants  
Stairs to overpasses  
All types of stairs exposed to electricity.

350mm 500mm 30 mm



### ADVANTAGES OF PRODUCT

Practical for block application  
Application of a required logo, graphic and lettering.  
Anti-static and anti-bacterial  
Ease of flooring and fixing  
Inner and outer interlocking system...



It is the first and only healthy soft (Rubber, EPDM) flooring material with its anti-static feature, by re-conducting the static electricity arising from the frictional movements...



“OUR 4 CM BLOCK PRODUCTS ARE 10-YEAR GUARANTEED FOR EVERY REASONS AND CONDITIONS”

## TECHNICAL SPECIFICATIONS FOR STANDARD PRODUCT FEATURES OF THE BLOCK RUBBER FLOORING MATERIALS



1. It should have university reports obtained by means of testing methods in 2 different years at least for the purpose of confirming that the manufacturing is performed at the same standards, which state that it has first quality granules completely separated from metal wires and harmful substances, 5% flourishing, %4 elastic epoxy, 4% boron/stainless grinding dust, 2% carbon fiber, 2% Carborundum and 5% iron oxide colors in its chemical analysis (06,1.5/2), and that they are anti-static products ,
2. All products should have an report for approved use by the testing labs (internationally accredited) approving their use in the passenger under- and over-passes with heavy passenger traffic and in the playgrounds, as granted by the departments of chemistry and materials of at least one University, including the reports and documents as stated above as well as their tests,
3. The products should have free maintenance and renewal guarantee for all the abrasion defects exceeding the 5mm abrasion tolerances at least once in every 9 months for 3 years, for the 4 cm applications of the products of 1000 m2 and over performed by the company,
4. The products should be in at least 70x100/300x120 blocks to bind and cover the ground, to constitute a weight and volume during flooring process,
5. All products should particularly have plug, interlock or clamp systems connecting between the block and blocks,
6. The products should be 2cm thick and 19,5 kg, 3 cm thick and 28 kg, and 4cm thick and 39 kg provided that the weights of the products per m2 be  $\pm 1/4$  kg on average based on their shapes and designs.
7. The stairs should have a ribbed, non-skid composite / metal / galvanized surface and be approved to be use in areas with heavy passenger traffic and in playgrounds, It should hold a 45 / 55 (SHORE (A) university report for softness testing,
8. Among the product ranges of the manufacturer, particularly the block rubber floorings applied to the playgrounds and kindergartens should have anti-static rubber edges and water groove approved by the university for use to prevent the impact and injury effects on the borders.
9. All products should hold an internationally accredited CE certificate of conformity at EU standard (indicating that it is approved for outdoor use),
10. The manufacturer, product owner or the company authorized to manufacture should hold the internationally recognized CE, ISO 9001, ISO 4001, OHSAS 18001 and should submit that they have been inspected at least four times including their applications,



11. The manufacturer or the company authorized to manufacture and all their products should have registered Trademark, CE, TSE and Design marking as indicated with hot embossed print as clearly legible, and these design registrations should not have the shapes usable for decades (such as triangle, quadrangle, pentagonal, hexagonal, star, keystone, single puzzle, etc.),
12. It should have the university report indicating that the result of the critical fall height (HIC) testing meets the criterion of 270 cm height,
13. It should have the reports for combustion tests indicating that it complies with the DIN 4102-11998-05 standards,
14. Its electrical resistance values should meet the TS / EN standards (395 kohm), as confirmed by the university report,
15. It should have the TSE 1176-1177/ certificates,
16. It should have a university report confirming that its anti-static values, vertical and ground transresistance are lower than  $10^{10}$  OHM (it especially prevents electric shock due to static electricity released when children play and because of friction),
17. It should have a university report indicating that the product has anti-static substances (such as carbon, carborundum, etc.) in its chemical content in accordance with TS EN 1081 ICS 83 060 standard, and another university report confirming that its resistivity values ranges between  $10^{13}$  OHM and 0.001 OHM/M, based on the former report,
18. It should have conformity testing reports indicating that the Anti-Static Current MA is 0384 at vertical resistance, 0.05 at ground resistance and 0.2 K OHM at surface resistance for all the products (vertical resistance is measured as 2600, ground resistance as 20.000, and surface resistance as 5.000 K OHM) in accordance with TS 2734 and TS EN 1081 standards,
19. It should have an EN standard testing report indicating that the electrical strength and electrical puncture strength are up to 789 Volts / cm, in accordance with TS EN 1081 ICS 83 060 standard,
20. Water absorption ratio should be 60893-2 for composite surface to slope and the amount of substance should be 8.2 mg,
21. It should have university reports for positive testing for the determination of water absorption and water spreading feature in accordance with TS EN 661,
22. It should have positive testing reports for abrasion, in accordance with TS 659 / EN660-1/ EN 660-2, 1-It should have positive testing reports for tensile and breaking strengths, in accordance with TS ISO 2285 /2001 E standards,
23. The acoustic sound absorption transmission loss testing should conform to ISO 10534-2 standard, and it should have testing and positive standard reports for its sound and vibration absorption and insulation features on the floors where it is applied,
24. It should have a university report for positive testing indicating its thermal and flame resistance against the cigarettes stubbed out or still lighting on the block rubber floor, in accordance with TS 11900 EN 1399 standards,
25. The sound absorption loss should be measured as 800-0.04 based on the frequency, and the sound transmission loss should be measured as 3000 / 25 db on average based on the frequency, the measuring results should be in a frequency range of 50-6400, in accordance with ISO 10534-2. (These results are of importance for the absorption of vibrations of metal and jangling materials in passenger overpasses, play- and sports- grounds),
26. For all the products applied by the company, an abrasion margin (4/5 mm) is left for a 4cm thick block product measuring the same as the tolerances as specified in the maximum requirements and the testing reports as stated above, for a period of 3 years, and these products should have a 3-year guarantee for abrasion-proofing and a 7-year guarantee for peeling-resistance, in accordance with the above criteria.
27. The manufacturer or seller of the products should make all the product prices confirmed by the Higher Board of Science, Ministry of Public Works, the Republic of Turkey and by Istanbul Chamber of Commerce, or by the chambers of commerce, or of industry where they are registered.



#### K-Q TSE- ISO-EN 9000

As Zenger Teknik, we have been granted the Certificate of Conformity to Turkish Standards, thanks to the quality of our products.

#### CE CONFORMITY

CE Marking consists of the initials of the letters ""Conformité Européenne", which means "Conformity to European Standards".

CE Marking is related to the products listed under some New Approach Directives prepared within the scope of New Approach Policy that the European Union adopted in 1985, in accordance with the conformity to the technical regulations, and is a union marking indicating that the products comply with the basic requirements of the relevant EU directives and have successfully passed all the required conformity assessment activities. CE Marking does not provide a quality assurance for the consumer but it only indicates that the product has the minimum safety requirements. CE Marking is an official marking indicating that the product conforms to the EU technical regulations.

As Zenger Teknik, we have a CE Marking, thanks to the quality of our products.

#### ISO 9001:2000 Quality Management System

ISO is the abbreviation for the "International Organization for Standardization", and it represents the quality management system established by the international organization for standardization. ISO 9001 Certificate is a standard identifying the effective quality management system. When a company meets the requirements of this standard, an ISO 9001 Certificate can be granted to this company.

ISO 9001:2000: ISO 9000 Standards are reviewed by ISO once every 5 years, and the necessary revisions are made in accordance with the opinions of operators and the requirements, and then it is issued again as revised. The figure of 2000 is the version date indicating that this revision was made and issued in 2000.

As Zenger Teknik, we have been certified for ISO 9001:2000 quality management system.

#### ISO 14001 Environmental Management System

It is a series of standards that describes how to install a system that enables to determine the environmental factors in every stages of the process beginning from the raw material until the product becomes a final product and supplied to the customers, and to take under control these factors with the necessary examinations and measures and therefore, enables to minimize the environmental hazard, and these standards are issued by the International Organization for Standardization.

ISO 14000 is not a product standard, but a system standard, and it is related to how to produce rather than what to produce.

It is based on monitoring and continuous improvement of the environmental performance.

It stipulates to comply with the requirements as defined by the relevant regulations and legislations, with respect to the environmental factors.

As Zenger Teknik, we have been certified for ISO 14001:2004 Environmental Management System.

#### OHSAS 18001 Occupational Health and Safety Management System

OHSAS 18001 is the "Occupational Health and Safety" standard as issued by BSI (British Standards Institute).

OHSAS 18001 has been prepared as a result of collaborative work of some national standards bodies and certification bodies, unlike to other international standards such as ISO 9000 and ISO 14000, etc., and it is not an ISO standard.

#### Turkish Patent Institute

Turkish Patent Institute is a private-budgeted independent and legal entity, as subsidiary to the Ministry of Industry and Trade, the Republic of Turkey.

The objective of TPE (Turkish Patent Institute) is to establish and protect enacted patent, trade and industrial property rights and to make the information and documentation concerning these right both in the domestic and international sources publicly available, to contribute to the technological progress of Turkey, to provide a country-wide free competition environment, and to render it possible for the research and development activities to be enhanced. As Zenger Teknik, our innovation of anti-ballistic plate is registered to Turkish Patent Institute.



## ZENGER MONO BLOCK ANTI-STATIC AND ANTI-BACTERIAL RUBBER FLOOR COVERINGS



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