VOGEL
SYSTEMS

Method Statement

ATHLETICS TRACKS

UV-COAT SYSTEM (MW)

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OVERVIEW

Athletics tracks have come a long way in the last 50 years. What once were facilities made of cinder, shale and stone are now predominantly rubberised surfaces that are laid over a concrete pavement and referred to as "all-weather", meaning they can be used almost immediately after rainfall. The first fully synthetic athletics track surface – known by the brand name “Tartan™” - was manufactured in the USA by 3M in the late 1960’s and was initially developed for the equine industry.

OVERVIEW

Today, there are many different types of synthetic track surface available. However, they all fall into two distinct categories: porous and non-porous Porous - Porous track surfaces are designed so that water will flow through the surface to the pavement below while allowing moisture to escape. Non-porous - Non porous track surfaces are designed so that water does not penetrate the surface. Water is removed by slope and by gravitational flow to a surface drain system. It is vital to the success of a non-porous surface that adequate drainage and base aggregate design eliminate water from beneath the surface. Note: In the UK there are currently three main types of non-porous system: solid, sandwich (hybrid) and prefabricated.

PRODUCTS AND MATERIALS

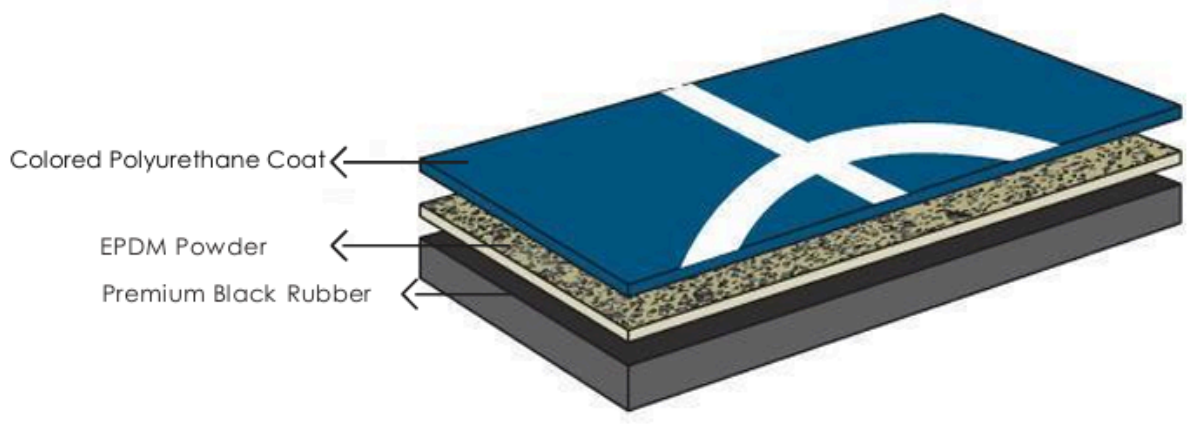
1. Urethane primer – All urethane primer shall be (VOGASPORT PU) for asphalt or concrete.

2. Urethane binder –All Polyurethane binder shall be (VOGASPORT PU – VOGASPORT PU -C) approved for running track applications. Binder shall be a single component polyurethane, moisture curing, and middle viscosity polyurethane binding argent based on MDI/TDI.

3.Premium Black Rubber – All rubber granules shall be of a high quality industrial grade (VOGA SBR). The rubber granules shall be control gradation (1- 3.5mm) containing minimum dust, less than 4% by weight. Use only premium recycled rubber.

4. EPDM Colored Rubber – All EPDM colored virgin rubber granules should be processed and graded to 0.05-4.00 mm in size unless otherwise specified(VOGA EPDM). The rubber shall contain a minimum of 20 % EPDM and be approved by the resin manufacturer. The specific density shall be 1.60 +/- 0.08 and shore a hardness of 60.

5. Polyurethane Colored – colored polyurethane coat should be processed The specific density shall be 1.60 +/- 0.08 and shore a hardness of 60.



- All colored virgin rubber granules should be processed and graded to 0.05-4.00 mm in size unless otherwise specified. All colors can be made to a fully flame retardant grade particularly recommended if specified for indoor use.

TOOLS & EQUIPMENT

- Brush

- Spray coat machine

- Spiked roller

- Flat trowel

- V-notch trowel

- Staight edge

- Airless machine

- Rack

INSTALLATION PROCEDURE

Base Requirements

- The layout, structural integrity, drainage and planarity are to be checked by owner or architect prior to the commencement of the surfacing work. For general specification for the construction of a track, refer to the American Sports Builders Association (United States Tennis Court and Track Builders Association).

- Before application of the surface course, the asphalt base should be tested for planarity using a 10' straight edge. There shall be no deviation from the specified grade in either the stone or the asphalt in excess of 1/8 " in any direction. The lateral slope from outside to inside is to be 1% (a maximum of 2% is allowed for High School standards), and a maximum slope of 0.1% in any running direction.

The asphalt base should be tested for planarity using a 10' straight edge

INSTALLATION PROCEDURE

Preparation

- **Scheduling** – The track shall be installed after the subsurface has been properly prepped and cured. The temperature should be rising during installation of surface.

- **Sub-base** – Asphalt is the safer subfloor for sport floorings for sure and must be always preferred than concrete surfaces. The asphalt must have a slope of0.7-1% and must dry for at least 21-30 days so that all solvents from the asphalt can evaporate. The asphalt sub-floor should be applied on well compacted 150mm road base sub-floor and asphalt should be laid in one layer (and not 2) in 6 to 8cm with fine and coarse aggregates (up to 15mm granulometry) like the kind of asphalt used in road construction. So, new road-grade asphalt will have to be laid (minimum 60mm) in one layer containing coarse aggregates and then mature for 30 days at least, before any application takes place on top of the asphalt to avoid bubbles on the final layer of the sport or rubber floorings.. Asphalt compaction tests are to be provided showing a compaction of 95% or greater. All concrete shall cure for a minimum of 30 days prior to surfacing. The. Flooding the asphalt surface to located irregularities is highly recommended.

- **Cleaning** – The entire subsurface shall be clean, dry and free from any foreign and loose material such as dirt, oil, grease, etc.

Asphalt compaction tests being conducted

INSTALLATION PROCEDURE

Installation

- **Primer**- After the asphalt base has cured for a minimum of 21 days (concrete base shall cure a minimum of 28 days), or as required by the owner, a prime coat consisting of Polyurethane Binder shall be applied with an airless sprayer or paint roller. Only the area to be covered within the working day should be primed to ensure a good bond to the base.

- **Base Layer** – After priming, the black rubber base layer shall be applied. Black EPDM rubber shall be mixed with Polyurethane Binder(ratio 4:1) using an approved mixer and laid by paving machine

- **Seal layer** – SBR powedr is mixed with PU colored binder, the rubber shall be poured, placed, and leveled by using an approved paver to provide a resilient base layer.

- **Surface Layer** –Depending on the ambient temperature VOGASPORT PU is diluted with solvents , prior to application, in order to achieve better fluidity. It is applied in 2mm total thickness, in two coatings by squeegee, depending on the desired thickness. The next layer follows the other after the previous starts to dry. After the application of the first layer and when it has already dry we use a sanding machine on the whole surface and then apply the next layer.

- **Line Marking** - Application of top coat VOGASPORT PU for UV-protection of the surface of EPDM. Especially with light colors such as blue, orange, green.

Applying EPDM with roller

Curing takes place at ambient temperature and is influenced by atmospheric moisture. Higher temperatures and moisture will shorten the cure time. After 3-5 days, the TOP SPRAY COATING is fully cured.

COMMON ISSUES

Key points

1- Top quality track surface suitable for international athletics at a competitive price
2- Offers many of the properties of the solid system at a reduced cost
3- Up to 100,000 athlete user hours per year
4- Less inclined to develop moss as water runs off and spores can't establish themselves as easily
5- Professional clean every 3 years
6- Re-mark every 7 years
7- Surface re-topping after 7-10 years dependent on use.

RISKS

- Avoid any inhalation of vapours, avoid skin contact Wear protective gloves and protective goggles In case of skin contact, rinse immediately with soap and water In case of eye contact, bathe eyes with water at once, then consult a doctor Observe the guidelines concerning the handling of epoxy resins and amines issued by the Employer's Liability Insurance Associations.

- As with all chemical products, care should be taken, during use and storage, to avoid contact with eyes, mouth, skin and foodstuffs (which can also be tainted with vapour until product has fully cured or dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Re-seal containers after use.

HEALTH AND SAFETY

- Make sure that the workers involved in the installation of the Cementitious Waterproofing are experienced and well trained.
- Every stage of the installation must be supervised properly. Check all the routes of material transportation and remove any form of obstacle that could cause accidents. There should be frequent cleaning during working hours.
- Every equipment used must be maintained in accordance with legal requirements.
- Electrical connections should be handled by qualified and approved electricians.
- The workplace must be barricaded and well protected to prevent unauthorized personnel. A work permit must be issued to every person by the main contractor before work starts on the site.
- Appropriate loading and offloading equipment should be provided by the contractor. All the equip, eats should be certified and handled by a qualified operator.
- Keep a material safety data sheet to ensure that materials star handled well especially chemicals. Major spill kit available and personal protective equipment must be made available to every personnel must be worn at all times.

STORAGE

- Materials shall be stored in a cool and dry place and avoid putting in direct sun light and as directed by the materials manufacturer.
- Materials shall be placed in a way to avoid the direct contact with ground soil.
- Materials shall not be exposed to the fire or naked flames in any circumstances.
- Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging.

CONTACT INFORMATION

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