

REVEALED! 5 FASCINATING THINGS YOU MUST KNOW BEFORE BUYING RUBBER FLOORING.



VAN DYCK
2024

#2 WILL BLOW YOUR MIND!



0874600400



11 Buckmann Boulevard
Durban, KZN



sales@vandyck.co.za



#1 YOU NEED A PROFESSIONAL TO INSTALL YOUR FLOORING?

THINK AGAIN!

Before starting the install

- The sub-surface must be level, clean and dry. It is recommended that all concrete slabs be tested for hydrostatic pressure. Simply test by placing a piece of plastic sheet 60 x 90 cm over concrete and tape edges. Moisture or dark areas noticeable under the piece of plastic after 24 hours indicate that the area is not considered to be dry.
- For rooftop applications, check with an accredited structural engineer to ensure your roof load requirements for this project. Ensure good drainage of the area by a well-defined gradient of the surface and well-placed drainage pipes in lower spots. Thoroughly remove all dirt and debris from the surface. A clean smooth surface will help in achieving optimum installation results.
- During storage, Van Dyck rubber pavers must be kept dry and adhesive must be stored above 50°F (10°C) in a dry, heated space.
- Check the room temperature. Temperature range for adhesive use: above 10°C and below 40°C. In-floor radiant heat should be shut OFF. Higher temperatures and humidity increase the curing rate and reduce the working time (pot-life) of adhesive resulting in adhesion problems. Follow instructions on label of can!



Preparation of the sub-surface

Concrete sub-surface

- New concrete sub-floors must be thoroughly cured and free from hydrostatic pressure before Van Dyck rubber surfacing is installed (a minimum of 28 days after pour). Consult adhesive specifications for allowable moisture tolerance. If existing concrete is too rough, you can smooth it by sanding or applying a cement based levelling compound (patch), allowing a curing time as recommended by the patch manufacturer. Follow manufacturer's installation guidelines. Surface must be clean and dry before starting the installation.

Asphalt sub-surfaces

- This type of surface must be hard, level and free of grease, oil and other contaminants. Surface should be pressure washed to remove all loose materials and be thoroughly dry before commencing the installation. Asphalt must be cured for a minimum of 14 days.

Wooden sub-surfaces

- Rubber paver installations over a wooden sub-surface are not recommended unless an appropriate waterproofing system has been applied (i.e. peel and stick, torch-down membrane, etc.). Trapped moisture on an unsealed substrate may cause deterioration and premature rotting of the wood.

Compacted granular surface

- Compacted granular surfaces are defined as grass, dirt, sand, or gravel base. All Van Dyck rubber pavers must lie on a firm, compacted, pervious surface. Excavate the area to the depth of the thickness plus a minimum of 4". Level and compact the area with a medium to coarse crushed gravel (3/4" minus). Moisten and compact with a flat plate vibratory compactor to 95% proctor. A small amount of concrete may have to be added to the sand. Depending on the irregularity of the resulting surface, use up to 1/4" graded medium sand to make a smoother surface. Moisten and compact again. Install filter cloth (geotextile) over top of compacted level sub-surface. The rubber pavers will move if there is more than a 1/4" layer of sand. Even after proper compacting, over time this type of installation is susceptible to ground settling. Any heaving or settling of soft ground sub-surface as a result of thawing is the sole responsibility of the installer and/or owner.

Roofing Membrane

- Eco-Rubber pavers are compatible with most roofing membranes and do not require the installation of a protective cover in most cases. The pavers are loose-laid and interlocked over the membrane which offers optimum membrane protection without limiting accessibility to the membrane. The interlocking pavers can be easily removed to access the roof surface for maintenance and repair.

Installation of rubber pavers

Layout

- Make sure the sub-surface is properly prepared. Determine area of layout. Mark all vent, post and/or structure mount areas before starting the installation. Start in one corner. As reference for installation, measure the designated roof area and snap chalk lines both length & width at the centre of the installation area.

Installation

- Place the first paver at a 90° right angle in your designated starting corner point. Some installations may be started against a wall or existing border. Experience will dictate which is best. Make necessary adjustments accordingly. Align first row of pavers along straight edge.
- Start second row with a half paver and install in a staggered method. For best results, a perimeter edge border is required. After pavers are laid, install the last two remaining perimeter borders, making sure they are as tight as possible against the pavers. A rubber mallet is helpful in this process.

OUTDOOR INSTALLATIONS OF RUBBER PAVERS WILL ALWAYS EXPAND AND CONTRACT WITH CHANGES IN TEMPERATURE AND HUMIDITY. THE DEGREE OF CHANGE WILL DEPEND ON GEOGRAPHIC LOCATION AND THE SIZE OF PROJECT. BOTH OF THESE FACTORS SHOULD BE CONSIDERED WHEN DETERMINING YOUR PERIMETER EXPANSION ALLOWANCE. A MINIMUM EXPANSION OF 1.3CM PER 3 LINEAR METRE CAN BE EXPECTED IN MOST CIRCUMSTANCES. THE CORRECT INSTALLATION OF OUTDOOR INTERLOCKING RUBBER PAVERS IS A STAGGERED OR ASHLAR PATTERN. THIS WILL ENSURE PROPER ALIGNMENT, A TIGHTER FIT, AND REDUCTION OF VANDALISM

Measuring & Cutting

- Lay paver on a piece of plywood, hold the metal straight edge on the cut line, and cut with sharp heavy duty utility knife. Let the paver droop or hang over the edge of the wood base and keep scoring the cut until separated. For odd angles, circular patterns, etc. a cardboard template is suggested. Change or snap off blades frequently to assure clean cuts.
- Make sure that you measure carefully so that the paver will fit properly and does not leave gaps, resulting in the installation being out of alignment.

Adhesive

General:

- Please read the label on adhesive packaging thoroughly before starting with the installation. Moisture is the single greatest cause of bonding failure! Higher temperatures and humidity cause the adhesive to cure faster. Use safety glasses, rubber boots, and rubber gloves when applying adhesive. Room must be well ventilated. For first aid and safety instructions see labels on can, technical data sheets, and MSDS.
- Applying Adhesive. All substrates must be structurally sound, smooth, clean, dry, and free from dust, loose material, grease, oil, wax, sealers, curing agents, and other foreign materials. Apply adhesive with 1/8" (3.2 mm) V-notch trowel.
- Put the paver that you are installing on top of the paver already glued down and pull towards the area you want to fill until the paver falls into place, then firmly press paver up to edge of existing paver. This will keep excess adhesive from protruding between the seams. Do not allow adhesive to cure on your hands or the flooring. Immediately wipe off excess adhesive using a damp cloth with mineral spirits (use sparingly). Cured adhesive is very difficult to remove. We strongly suggest wearing gloves when applying adhesive. Do not use tape of any kind to help secure seams during glue down installation. Tape residue cannot be removed from the top surface. When applying adhesive, glue must be spread evenly under each paver to avoid differences in paver height. Allow 48 hours setting time. Avoid heavy traffic.
- Clean Up Adhesive. Excess adhesive should be cleaned

#2 RECYCLED RUBBER IS TOXIC. MYTH BUSTED!

Many of the concerns that have been raised by the public are about the potential exposure to chemicals in tyre crumb rubber infill used in synthetic turf fields and not in moulded rubber products manufactured from rubber crumb. Chemicals of interest or concern used in tire manufacturing range from polyaromatic hydrocarbons (PAHs) in carbon black to zinc oxide (ZnO), which is used as a vulcanising agent and could contain trace amounts of lead and cadmium oxides.

The European Chemical Agency released a report in 2017 and confirmed that "ECHA has found no reason to advise people against playing sports on synthetic turf containing recycled rubber granules as infill material. This advice is based on ECHA's evaluation that there is a very low level of concern from exposure to substances found in the granules. This is based on the current evidence available."

Another journal article published in 2017 confirmed: "Estimated non-cancer hazards and cancer risks for all the evaluated scenarios were within US EPA guidelines. In addition, cancer risk levels for users of synthetic turf field were comparable to or lower than those associated with natural soil fields."

Further research conducted in Holland reaffirmed the fact that rubber crumb in synthetic surfaces is safe, "The results of this research indicate that playing sports on synthetic turf pitches with rubber granulate is safe. The health risk from playing sports on these synthetic turf pitches is **virtually negligible**.

At Van Dyck, the rubber crumb utilised in its products are processed by S Africa's largest tyre recycling company, Mathe Group (<https://mathegroup.com>). The rubber crumb has been tested for toxicology and PAHs in Europe. The results reaffirm that crumb rubber poses no health risk as an infill product.



#3 RECYCLED RUBBER PAVING REQUIRES NO MAINTENANCE!

GENERAL CLEANING & MAINTENANCE ROUTINE

MAINTENANCE EXTENDS LIFE AND ENHANCES APPEARANCE.

The pavers are coated with water based mould release residue, causing slight discolouration and slipperiness. For faster removal, simply apply a solution of neutral cleaner (i.e.: simple green) and agitate with brush or mop, then rinse with water. Otherwise, let mould release wear off with time, which could take up to four weeks.

Sweeping

- Sweeping the surface with a push-broom will be the most common method of keeping the pavers clean. However, because of the porosity and granular texture of the surface, it is difficult to remove all contaminants by sweeping alone.

Vacuum

- Using a vacuum will produce similar results as when used on carpet.

Water Hose

- Use a water hose with a spray tip to remove contaminants from porous top surface. If using this method, please ensure proper drainage.

#4 RECYCLED PRODUCTS DON'T LAST AS LONG AS VIRGIN PRODUCTS?

TRUTH TOLD!

While implementing new initiatives such as a Buy Recycled program, you may come up against a range of myths about recycled products. That is exactly what they are – MYTHS, not REALITY! The following are some common myths and the facts about recycled products. More information is provided in the fact sheets on product specific issues.

MYTH 1: Products made using recycled materials often meet the highest industry standards and have undergone extensive testing. Ask suppliers to demonstrate the quality of their products or provide samples for trial. Many recycled products have warranties or guarantees of performance. The quality of recycled products is improving as manufacturers respond to market demand and accept responsibility for products they produce.

EXAMPLE: Manufacturers of recycled products have to compete in a market place with products made from virgin materials.

MYTH 2: Recycled products are more expensive. Recycled products are often very competitive and if you don't ask for a quote, you may be losing out. In the long term, buying recycled, recyclable and less wasteful products will reduce costs. Many recycled products have multiple lives and save the expense of extracting virgin materials. Buying recycled products in significant volumes will result in less wastage and save landfill space. Many recycled products offer best value for money when issues such as maintenance and energy savings or less tangible benefits such as occupational health and safety (OH&S), public relations or the positive impact on Council's reputation, are considered.

MYTH 3: Recycled products consume more energy and resources than those made from primary material. Many recycled materials offer significant savings in terms of energy and emissions as well as reductions in resource use.

EXAMPLE: In South Africa, there are an estimated 60 000 000 tyres in landfill. There are thousands of tyres awaiting processing and recycling on a monthly basis that could be manufactured into novel products. It is a well known fact that the emissions utilised in recycling tyres is far less than compared with emissions associated with landfill.

#5 IT IS SAFER THAN OTHER TYPES OF FLOORING? TECHNICAL INFORMATION PROVIDED!

Many home owners as well as commercial users choose rubber flooring for their place because of its durability, low cost of maintenance, easy cleaning, antislip properties which makes it an ideal choice to maintain a clean and hygienic environment. Rubber flooring has many unique benefits over conventional flooring due to the inherent characteristics of natural rubber. For more complex installations such as playground surfaces, it is vital that one follows the respective legislation in the country of installation. We consider this in more detail below.

Critical Fall Height for Playground Surfaces

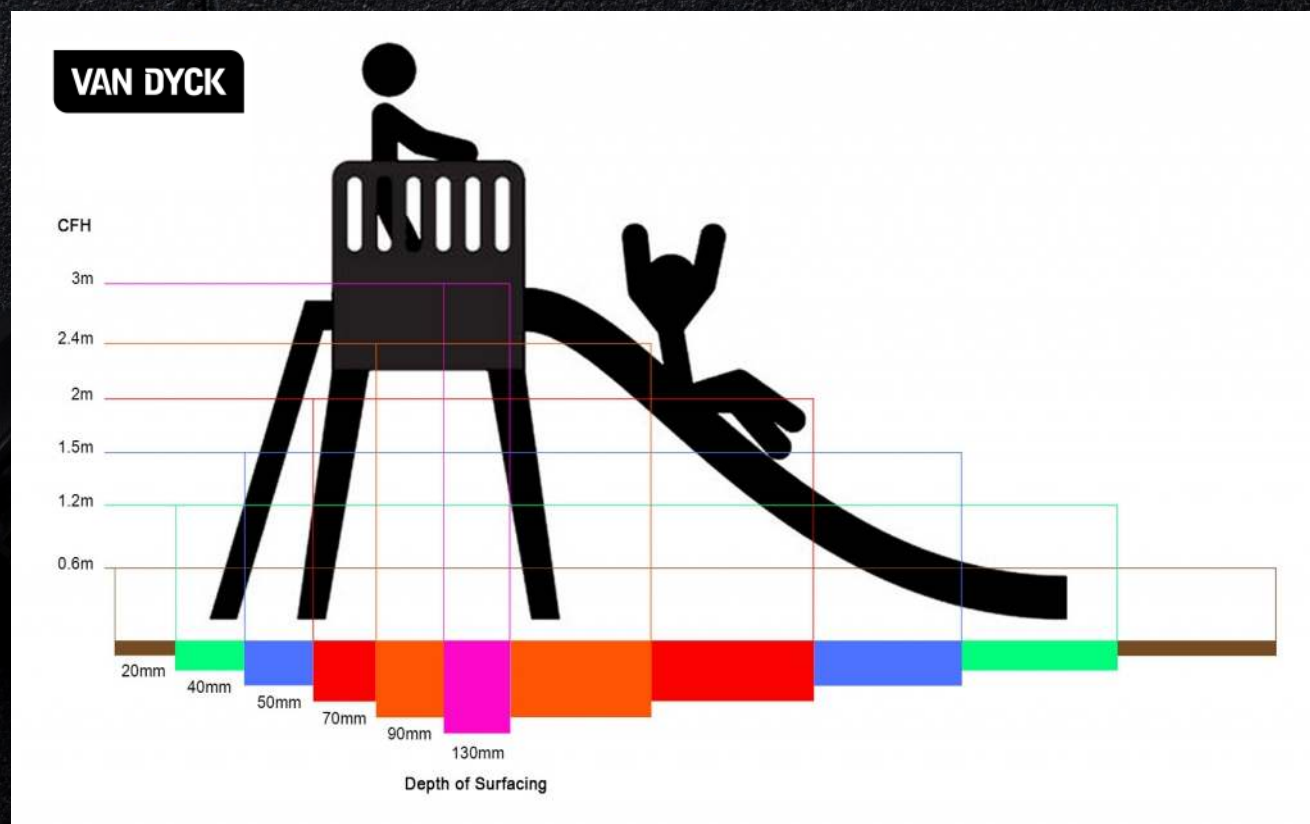
It is essential to be aware of Critical Fall Height regulations when having safety surfacing installed at your school or park and the importance of this. CFH is important to ensure that young people are safe when using play equipment. We will need to consider the height of any play equipment within the facility along with the existing surface which the flooring will be laid up to in order to determine the depth of surfacing required.

Playground equipment comes in various heights. Impact protection surfacing is installed to meet various critical fall heights. Our shock-absorbing Impact protection slabs are suitable for any fall height ranging from 0,60 – 3,00m. The CFH is defined as the lowest fall height that generates a HIC value of 1000. Each Slab is individually tested to determine its Head Injury Criterion (HIC) value. When installed, the slabs are pre-certified to meet criteria in accordance with DIN EN 1177:2008; the international standard which requires shock absorbent surfacing for a fall height of 0,60m or higher. Impact protection slab thicknesses correlate to different critical fall heights. The higher the fall the thicker the slab needs to be.e.g. An Impact Protection Slab with a thickness of 70 mm provides impact protection for a 2,10m fall.

The South African Standard (SANS 51177:2010) for critical fall height has the identical implementation and is a direct adoption of the International Standard EN 1177:2008.

How do I work out the Depth of Surfacing for my play equipment?

This varies between each surfacing company as their products are tested individually. For stationary equipment, the CFH is calculated from the highest point on the equipment which is intended for play – usually the platform height. For equipment from which a child hangs, the height of the hand support is used. Here's a diagram demonstrating the guidelines for our rubber safety surfacing underneath stationary play equipment.



How do I work out the Critical Fall Height for Swings?

Rarely do we see swings in schools and nurseries. However, for any Maths teachers – the critical fall height of swings is calculated differently from stationary equipment. We calculate the CFH from the centre of the stationary seat surface at 60 degrees. To work this out, we divide the length of the chain of the swing by two, then add the distance from the seat to the ground. Here's a diagram demonstrating the formula used.

How do I work out the Area of Surfacing for my play equipment?

Not only is the depth of safety surfacing crucial for your play equipment, but you also need to take into account the area size of surfacing. This is in case of any tumbles that may occur from children falling from the play equipment. For stationary equipment, if the critical fall height is 1.5m or less, then the surfacing should extend to at least 1.5m beyond the edge of equipment. See the table below for play equipment over this critical fall.

