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The Leading Specialist in Outdoor Sports Surfaces

Working with organisations and private clients for 20+ years

Footwear

Good quality outdoor court shoes are recommended for all surfaces. Training shoes or other types of footwear with bars, studs or sharp serrations on the soles should not be used.

It is useful to have a notice at the entrance to the court recommending the correct type of footwear. A player wearing incorrect shoes with aggressive soles can do a great deal of damage in a very short time.

It is also wise to avoid black soles on painted surfaces because these tend to leave unsightly black marks, which are difficult to remove.

It is advisable to have some form of mat, scraper or shoe-cleaning device at the entrance to the court so that players can clean their shoes before going on the court. In addition, hard soled training shoes will remove the aggregate in the paint that provides the slip resistance at a greater rate than under normal conditions.

Furniture, Toys and Equipment on the court

Most surfaces will be indented and therefore damaged by heavy or sharp objects standing on the court.

Umpires chairs, garden seats etc. should not be put directly onto the surface, but boards or pads should be placed under the legs to spread the load.

It is also essential to prohibit roller-skates, skateboards, bicycles, wheel barrows full of sand and anything else that children may bring on the court and which could do damage to the surface. Family pets should also be excluded.

Machinery being used on the court surface, such as compressors, water-pumps etc. should be stood at all times on a piece of plywood or similar.

The Court Perimeter

A strip of ground at least two feet wide outside the surround fence should be kept clear of vegetation at all times to form a barrier against plant and weed encroachment onto the playing surface. This may be done quite simply with an appropriate weedkiller. It follows from this that climbing plants such as roses or clematis should not be planted to grow up the surround fencing. Not only may their roots disturb the court surface and their leaves pollute it, but they may cause severe damage to the fencing during high winds.

Shrubs, trees and hedges should be planted as far back from the court as possible, certainly allowing sufficient room between the surround fence and plants for maintenance to be carried out between them.

Tree Roots

Trees, hedges and shrubs to be planted close to the court should be chosen carefully to avoid any with aggressive root systems, such as poplars and sycamores, as these can cause major disturbance of the surface. If their use is essential, the insertion of a root barrier between the trees and the court is strongly recommended, just as it is when the court has to be sited near mature specimens.

Overhanging branches

Branches of trees which overhang the court invariably cause problems. Water dripping from the branches may cause slippery or discoloured patches, encourage the growth of algae or moss and sometimes even erode the surface. The secretions of aphids coat the court surface with a sticky blackish substance, which may impair foothold and encourage algae and, in severe cases, damage the surface paint. Last, but by no means least, the droppings of larger birds, such as pigeons and collared doves, can cause damage especially to painted macadam surfaced during the summer months. For all these reasons overhanging branches should be pruned well back.

Substances to Keep Away from Tennis Courts

Cigarettes

All tennis courts should be made a No Smoking area. Cigarettes are unlikely to constitute a fire hazard, but cigarette ends will leave unsightly burn marks on most surfaces.

Chewing-gum

This should always be banned from tennis courts. Chewing gum is invariably difficult to remove, although some advise the use of ice cubes which harden the gum and allow it to be broken away more easily.

Petrol, Oil and Solvents

Petrol, oil or solvent spillages will seriously damage most surfaces, especially those that are bitumen-bound or are superimposed upon a bitumen-bound sub-base. Great care should be taken to ensure that any machinery used within the court area, such as a garden vacuum cleaner, is clean and in good repair and does not drip petrol or oil. It is strongly recommended that machines be removed from the court surface before refilling with petrol, diesel or oil. In the event of a spillage immediate copious irrigation with tepid water and detergent may minimise the damage.

Salt and de-icing agents

As a general rule salt or other de-icing agents should never be used to remove snow or ice from tennis courts; their effect is unpredictable and they may cause serious damage.

The Net and Net Posts (if applicable)

Do not over-tighten the tennis net. This will cause damage or even breakage of the steel cable and in severe cases may pull the net posts inwards, occasioning a very costly repair.

A common cause of the net being over-tightened is that the centre band is too short preventing the correct net height from being achieved. The centre band will usually be provided with a screw adjuster and this should be carefully re-tightened.

The correct height for the net is 0.914m. The traditional method of using two rackets to provide the correct measurement is no longer practical, because of the diversity of modern rackets. A net measuring stick should be available at all times for this purpose.

The net should always be slackened after use to reduce strain on the equipment and to prevent lower temperatures at night causing the cable to contract and be stressed still further.

It is also a wise precaution to wrap the net over its headband to prevent the net being abraded by the surface as it blows in the wind. If the court is not to be used during the winter, both the net and the net posts should be removed and stored, ensuring that they are first carefully dried.

The winding mechanism should be greased occasionally to ensure smooth and quiet operation and the posts checked for rust. It can also be helpful to lightly grease the post sockets and that part of the posts that fits into the sockets. This can greatly facilitate the removal of the posts, especially if there are left in position for long periods.

Weeds

Before constructing the court, the installer will have removed visible weeds. This is usually effective but sometimes some weed growth may occur, either involving highly resistant species or windblown seed. It should not be automatically assumed that the weed removal has been carried out inefficiently. Weed growth that does occur usually represents a temporary inconvenience and only very rarely constitutes a significant threat to the court.

The extent to which weeds may constitute a nuisance will also depend very much on the type of surface and the location of the court. Weeds are virtually unheard of on porous concrete surfaces and are rare on impervious acrylic surfaces. Windblown seedlings can sometimes establish themselves in sand-filled artificial grass surfaces, but usually wither away quickly.

Treating weeds

All grass, weeds, seedlings and shallow rooted plants should be treated with a suitable weed killer.

Deep-rooted weeds, such as thistles, convolvulus, bindweed, mare's tail, tree suckers, etc. should be treated with a systemic weed killer, spraying all the growing parts of the weed thoroughly with the solution. These weed killers work by being carried down to the roots of the plant and, therefore, act more slowly. The weeds should be left in situ until the weed killer has taken effect. Systemic weed killers will only work very effectively on young, fast-growing weeds and will be less effective late in the summer when the weeds have hardened off and growth has slowed down.

General hints

Treat weeds as soon as they appear – do not let them become established.

When the weeds are dead they may be carefully removed. Great care should be taken not to disturb the surface of the court. A sharp, narrow-bladed knife may be useful for cutting off thick weed stems below the surface. If the weed has lifted the court surface, it should be carefully trodden down with the flat of the foot once the weed has died.

If very deep-rooted weeds persist in spite of the spot treatment described above, advice should be sought from either the installer or a specialist weed-killing company.

Moss

Moss is a naturally occurring substance and we can never guarantee that it will not return to your court if the prevailing weather and surrounding conditions are favourable. Where vegetation exists around your court, including trees that cast shade over it, there will be an increased risk of moss returning as these factors contribute towards excellent moss growing conditions. Treatments for moss eradication are restricted by health and safety legislation and are 'non-residual', which means they only kill the moss that is present at the time and therefore it will not prevent further moss from growing in the future. We therefore recommend that you either incorporate your own regime of regular moss treatment if this is required, or we can quote to do this, as and when you feel it may be necessary.

Introduction

Porous macadam courts consist of a permeable foundation of broken, graded stone, on which is laid the macadam basecourse and wearing course (or playing surface). This is then coated with a coloured, acrylic surface coating. The play-lines are then painted onto the coloured surface, but self-adhesive tapes may also be used.

The resulting playing surface is fully permeable, hard-wearing, playable throughout the year and requires relatively little maintenance. But however modest this maintenance requirement, it is, nevertheless, of vital importance if the surface is to remain good to look at, good to play on and long-lasting. Indeed, the installers guarantee is likely to be conditional upon the recommended maintenance requirements being carried out with reasonable efficiency.

What Maintenance and Why

The maintenance procedures are designed to ensure that:

- The playing surface is kept scrupulously clean;
- The free drainage of surface water is maintained throughout the life of the court; and that
- The court looks attractive and well cared for at all times, and achieves a reasonable life span.

These objectives are achieved by:

- Sweeping or vacuuming leaves and other detritus from the surface;
- Occasionally washing the surface; and
- Applying prophylactic treatments of moss-killer.

Keeping the Surface Clean

Leaves, tree flowers, pine needles, fluff from tennis balls and other detritus should not be allowed to remain on the surface for any length of time. If this happens they rapidly rot down and settle into the interstices of the surface impairing drainage and providing a growing medium for algae and moss.

A wide soft broom can be used to sweep the surface but this has a tendency to push smaller material into the surface. A rubber-tined rake is usually better, albeit rather slow and arduous. Best of all is a mechanical garden vacuum cleaner, which will greatly speed up the operation and do it more efficiently. Mechanical leaf sweepers can also be good. The equipment should be well maintained and carefully operated to avoid contamination of, or physical damage to, the playing surface.

At least once a year the court surface will benefit from a vigorous professional pressure clean. This not only has the effect of keeping the surface interstices clean and free-draining, but is also essential for maintaining good foothold.

Courts near busy roads are particularly susceptible to becoming coated with traffic film, whilst those near trees may become coated with honey-dew from aphids, moss and algae. The resulting black film from either cause can make the courts very slippery after rain.

The Post Construction Period (Macadam Installation Only)

The installer will have indicated when play can commence on the new surface, and his instructions should be followed meticulously.

Thereafter, for the first few months the surface will still be slightly tender as the bitumen and surface coating achieve their final hardness. Whilst the surface can be kept in full and normal use, as with a new motor car, a little extra care and vigilance will pay dividends. In particular unsuitable footwear and other bad habits such as racket abuse should be prohibited, especially in warm weather.

On a very new court water will sometimes stand on the surface after heavy rain. This is a very temporary phenomenon resulting from surface tension, and should not cause concern unless it persists.

Play in Hot Weather

The modern porous macadam surface can be produced with special additives to lift the temperature at which it softens in hot weather, significantly above that which renders normal macadam unusable. The surface coating is also beneficial in this respect.

Nevertheless, a court may still soften in hot weather, especially in the first season after construction. Thereafter the tendency to soften should diminish rapidly.

If the surface softens play should be stopped immediately, because serious damage can result from continuing to play. The first sign of the problem is usually when black marks begin to appear as a result of the paint being rubbed or scuffed off. It is sometimes possible to cool a hot surface by hosing it down with cold water to allow evening play to take place.

Softening is a phenomenon usually confined to the first season, but, even thereafter for a year or two, the surface should be checked if very hot weather is experienced.

Bird damage

An unusual nuisance that may sometimes be experienced is damage caused by bird droppings. This is usually only a significant problem during the first year or two of the court's life, during the summer months, or where branches overhang the court.

The droppings adhere to the surface, dry out in warm weather and shrink. In the process the paint coating and even stone chippings may be pulled off.

The remedy is to cut back overhanging branches. If the droppings are already in situ they should be hosed away. Damaged spots should be carefully firmed with the foot and touched up with surfacing paint.

Worms

Another rare cause of surface damage is that caused by worms. In mild, wet weather worms sometimes appear on the court surface, usually in ones or twos but very occasionally in larger numbers. How they get there is something of a mystery, but once on the surface they seem unable to get any further and usually die. In warm weather, they then adhere to the surface and shrink causing very similar damage to bird droppings.

Worms on the playing surface should be removed as soon as possible.

Damaged spots should be carefully firmed with the foot and touched up with surfacing paint.

If the problem persists consideration should be given to applying an appropriate worm-killer. Repeat applications may have to be made, copiously watered in, to ensure that the subsoil beneath the courts is impregnated.

Snow and ice

Snow and ice should not prove harmful and can be allowed to melt through in due course. Powdery snow can be swept away using a wide soft broom or wooden scraper. Metal shovels or scrapers should not be used because they may damage the surface, as will mechanical snow removing equipment, such as mini tractors.

Do not use salt, urea or other chemical de-icing agents. Their effect is unpredictable and they can cause severe damage.

Daily - at the end of the days play.

Make sure the net is slackened and rolled up in the middle (if applicable).
Make sure the gate is shut.

Weekly

Clear leaves and rubbish from the court.

Monthly

Deal with any moss or algae.

Annually

Pressure Wash the court.
Apply moss-killer

Note:

These are minimum recommendations. Common sense and careful observation should prevail. If any serious doubt exists about the effectiveness of the maintenance regime or the condition of the court, call in the installer immediately. It is better to be safe than sorry.

Product Specifications

Description & Usage

Acrylic sports coating is a premium acrylic spray applied coating for porous surfaces. It is especially formulated to create slip-resistant surfaces when applied on porous macadam tennis courts, netball courts and other recreational areas. With a high ratio of acrylic binder, it will help protect any firm surface, whilst making it more attractive at the same time. It dries quickly, providing a flexible form, and ensuring higher durability and a longer lasting surface.

Acrylic sports coating comes ready-to-use so no additional water needs to be added on site (except to rinse the buckets out).

Surface Preparation

The secret of a successful painting job is proper surface preparation. The surface must be thoroughly cleaned making sure that it is free of anything which could adversely affect the adhesion of this coating to the surface including;

- Loose, scaling, peeling, blistering, chipping, cracking, flaking, chalking, powdering paint
- Dust, dirt, sand, soot, grease, oil, tar, wax, soap film or petroleum-base residue
- Lye, lime, chlorine, salt, calcimine, efflorescence or any other chemically reactive substance
- Mould, fungus, mildew or any other growing organism of any kind

Application

Acrylic sports coatings are applied in two separate applications in opposite directions & is accomplished by the use of heavy-duty airless sprayers. The sprayer's tip size should vary between 27-32. Before applying any coating the paint must be thoroughly stirred to obtain the consistency desired for texture, aesthetics and performance. The first application should be coated in lines with the airless sprayer at an angle. It is important to make sure that the coating is sprayed in the same direction from end to end, while leaving minimum overlaps between the lines. The next application must be sprayed when the surface is

dry, from the opposite direction. This method makes sure that the surface does not lose its porosity.

Base

Acrylic sports coatings should not be applied until after the surface has hardened properly. During the summer it should take approximately three weeks and could take up to three months in the winter.

Coverage

Coverage is dependent on such factors as silica gradation, surface porosity, climatic conditions and the technique and expertise of the applicator. Product coverage rate recommended is between 0.304 and 0.316 litres per square metre.

Drying Time

One hour under optimum drying conditions. Humidity, surface temperature and ambient temperature will affect drying process.

Limitations and Precautions

Acrylic sports coating should not be applied when temperature is below 5 degrees or 41 Fahrenheit or is unlikely to remain above these temperatures in the next 5 hours. The surface should be thoroughly dried before it is coated and there is no possibility of inclement weather, such as rain or heavy dew and the relative humidity does not exceed 90%. Protect from frost. Do not store in direct sunlight. Acrylic sports coating should be allowed to cure for at least 72 hours before courts are opened for use. Over spraying can seal a surface and give rise to slip problems. It is recommended that solvent based paints not be used in conjunction with this coating (at any stage in the life of the surface), as it may affect the subsurface and the coating.

Clean Up

Clean tools and equipment with water immediately after use. In the case of the product spilling or tipping over it is recommended that it be cleaned immediately with water, as when it dries it will be very difficult to remove.

Preserving Agents

Acrylic sports coatings contain highly efficient preserving agents, which have been studied with the use of accelerated testing to identify the most efficient

additives, which will ensure optimal and long lasting protection. Acrylic sports coatings also contain preserving agents for in-can protection and dry film preservation that will protect the coating against bacteria, fungus, algae and insects. These preserving agents are of low product toxicity, therefore not harmful to the environment. These preserving agents can be expected to protect the coating for over 3 years if the court maintenance as stated below is done appropriately.

Slip Resistance

Acrylic sports coatings contain a very effective aggregate to give slip resistance characteristics to the coated surface. The application of the paint will help reduce slipping and accidents under wet, damp and dry conditions.

Below are the results for a slip resistance test determined using Method ITF CS03/01 – detailed in the *Initial Study on Performance Standards for Tennis Court Surfaces*. The centre of Sports Technology (CST) an independent test house – carried out the tests on a 6mm Open Textured wearing course.

Conditions / Grip Rating	High Grip 4	High Grip 5
Dry	94	105
Damp	71	75
Wet	66	76

High Grip 4 meets the ITF Recommendation rating of between 60 – 100 and is suitable for Tennis & Multi-purpose surfaces

High Grip 5 meets the AENA Recommendation rating of between 75 – 105 and is suitable for netball & 5-a-side Football.

Court Maintenance

Acrylic sports coating requires relatively little maintenance to provide a good-looking surface, although this maintenance is of vital importance if the surface is to remain in good playing condition. If the maintenance is not done on a regular basis, the dirt left on the court will rapidly rot down and settle into the gaps

between the stones, impairing the drainage and providing a growing medium for algae & moss, even though the coating contains preserving agents.

- Leaves, trees, flowers, pine needles, fluff from tennis balls and other detritus should not be left on the surface for any length of time. Sweeping can do this however vacuuming is preferred as sweeping has a tendency to push small material into the surface.
- Overhanging branches should be cut back if possible, as dirt tends to fall on the court, which can cause the surface to become very slippery.

It is also recommended that the surface has a vigorous pressure wash once a year carried out with the correct water pressure. The use of specialist cleaning equipment is recommended, where the volume of water rather than the pressure applied is responsible for the cleaning of the playing surface and pores within macadam.

Product Specification

Description & Usage

Water based line paint is a non-glaring, non-fading, 100% acrylic formation designed for use on all recreational areas.

Acrylic line paint is available in textured and non-textured forms to provide a consistent surface texture and ball bounce, and it is available in different viscosities so that it can be brush, roller or spray applied.

Surface Preparation

The surface must be thoroughly cleaned making sure that it is free of anything which could adversely affect the adhesion of this coating to the surface, including;

- Loose, scaling, peeling, blistering, chipping, cracking, flaking, chalking, powdering paint
- Dust, dirt, sand, soot, grease, oil, tar, wax, soap film or petroleum-base residue
- Lye, lime, chlorine, salt, calcimine, efflorescence or any other chemically reactive substance
- Mould, fungus, mildew or any other growing organism of any kind.

Application

Acrylic line paint is provided in Ready-to-use form and is easily applied. Before applying, the paint must be thoroughly stirred to obtain the consistency desired for texture, aesthetics and performance.

Base

Acrylic line marking paint should not be applied until the surface has hardened/cured properly. During the summer, it should take approximately three weeks or up to three months in the winter.

Coverage

Coverage is dependent on such factors as silica gradation, surface porosity, climatic conditions and the technique and expertise of the applicator.

Drying Time

Dries to touch in thirty to sixty minutes under optimum drying conditions. Humidity, surface temperature and ambient temperature will affect the drying process. The surface should be left a minimum of twenty four hours before use.

Limitations & Precautions

Acrylic line paint should not be applied when the temperature is below five degrees Celsius (forty one degrees Fahrenheit) or is unlikely to remain above these temperatures in the next five hours. The surface should be thoroughly dry before it is coated and there is no possibility of inclement weather, such as rain or heavy dew, and the relative humidity does not exceed 90%. Protect from frost. Do not store in direct sunlight. Over spraying can seal a surface and give rise to slip problems. It is recommended that solvent based paints not be used in conjunction with this coating (at any stage in the life of the surface), as it may affect the subsurface and the coating.

Preserving Agents

Acrylic line paint contains highly efficient preserving agents, which have been studied with the use of accelerated testing to identify the most efficient additives, which will ensure optimal and long lasting protection. It contains preserving agents for in-can protection and dry film preservation that will protect the coating against bacteria, fungus, algae and insects. These preserving agents are of low product toxicity, therefore not harmful to the environment. These preserving agents can be expected to protect the coating for over three years if the court maintenance is done properly.

Slip Resistance

Acrylic line paint contains a very effective aggregate to give slip resistance characteristics to the surface. The application of the paint will help reduce slipping and accidents under wet, damp and dry conditions.

General Maintenance for Fencing

For elements of a galvanised and polyester powder coating (PPC) finish, please follow the below guidelines:

Products of a galvanised and polyester powder coating finish required minimal maintenance.

- In order to maximize the visual quality of the product, it is important to clean it regularly. The advised frequency of this depends largely on the environment in which the materials are installed.
- In urban environments, we recommend no more than 12 months between cleaning unless excessive contamination/ soiling occurs. In areas of high pollution, marine environments (including swimming pools), cleaning should be carried out no less than every 3 months. A record/ cleaning schedule should be maintained in order to maintain warranty validity.
- Cleaning can be carried out using a solution of mild detergent in warm water. Use a soft cloth, sponge or natural bristle brush. Avoid the use of abrasive materials as this can in certain circumstances damage the product.

For elements of a galvanised only finish, please follow the below guidelines:

One of the ways in which galvanising protects steel from corrosion is by the development of a thin barrier film of insoluble zinc corrosion products (known as a patina) on the outer surface of the galvanised steel through exposure to the atmosphere. Abrasive cleaning will wash away this protective patina and the galvanised article will have to build up this barrier protection again, consuming more of the zinc. Constant abrasive cleaning will consume the zinc more quickly and therefore may reduce the life of your galvanised steel product.

The following will help protect your product:

- Avoid direct contact of your galvanised steel product with dissimilar metals, such as brass and copper, particularly in corrosive environments. Where dissimilar metals are to be used together ensure that there is an insulator between the dissimilar metal and the galvanised product.
- Galvanising may be cleaned (we recommend a cleaning schedule of between every 12-18 months) using a water-based emulsifier, alkaline-

based cleaners with a pH of 12 or lower or organic solvents. Then rinse the area with fresh water and wipe clean with a soft cloth.

- For galvanising product situated in a highly corrosive environment eg. coastal, heavy industrial, etc it is recommended the product be rinsed with potable water on a regular basis, particularly under sheltered conditions (i.e. not exposed to rain and sun).
- It is important to note that mechanical methods of cleaning zinc surfaces can cause aesthetic issues. The “cleaned” areas are likely to contrast with adjacent untreated surfaces and may take a significant period of time to weather to a uniform colour. If aesthetics is a large concern, it is advisable to first test the cleaning method in an inconspicuous area in case the aesthetic effect is unappealing.
- Paints, such as graffiti, can be removed using thinners. If some form of scraping is required, use plastic or wooden scrapers (not steel/metallic items). If the paint is wet or fresh, then normal thinners can be used. Once the paint has hardened, then a non-alkaline stripper can be used. Again, rinsing is important to remove residues that may cause discolouration later and/or encourage corrosion.
- A record/ cleaning schedule should be maintained in order to maintain warranty validity.

Posts and Iron works

Minor damage to galvanised posts and steelwork can be made good by rubbing down with abrasive material to bare metal and applying 2 coats of cold galvanized coating. If the posts or metalwork is powder coated on top of a galvanised finish the process as described above and a plastic board paint applied as per manufactures instructions.

Chain Link Mesh & Line Wires

Any damaged chain link mesh should be removed from the fence and replaced. Line wire winder bolts that can be found around the fence must be checked on a regular basis and tightened if required to ensure adequate tension for the fencing.

Gates

Gates should be kept closed at all times or kept fully open with the drop bolts down into their sockets to prevent damage from wind or passing vehicles causing the gates to slam onto fixings etc. Sliding latches should be checked on a regular

basis to ensure ease of use when not in use the gate kept closed with the slide latch in its keep.

Windbreaks of Fence

The posts used in these works are not designed to take windbreaks. Any damage that occurs as a result of use of windbreaks to the fencing is therefore at the risk of the client.

Regular Care

Check bolts are secure at 3 monthly intervals and in the unlikely event that they have vibrated loose, tighten them with a spanner to suit. Fencing systems are not designed to be climbed upon and failure to adhere to this could cause extensive damage to the fence.