

**REGULATION 22. STANDARD RELATING TO THE USE  
OF ARTIFICIAL PLAYING SURFACES**

**IRB PERFORMANCE SPECIFICATION FOR  
ARTIFICIAL SURFACES FOR RUGBY**

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## 22.1 Introduction

### Introduction to Artificial Turf of the Latest Generation

The game of rugby has traditionally been played on natural turf. This has not entirely been for traditional reasons alone. Natural turf in ideal conditions provides an excellent surface for rugby. It ensures the correct degree of foothold, shock absorbency, ball bounce, traction, deformation, stability and aesthetics to play the game to the highest International level. Unfortunately there are downsides to this ideal surface. Natural turf requires an intensive maintenance regime to ensure it retains its performance characteristics.

Natural turf is a living mechanism that needs careful management of its nutrient intake, its grooming, decompaction of the soil structure to allow air and moisture to penetrate to the roots, aeration to re-introduce drainage, sunlight etc. The list is long. Remove one or more of these components and the surface will perform less than ideal. A further drawback is the intensity of use such a facility can be subjected too. The more a surface is used the more wear and tear the surface is subjected too. There is a finite limit to the intensity of use we can allow a natural surface to be subjected too. Permanent damage will take place that will alter the performance of the surface to such a disastrous extent as to make the field unsuitable for the game. Albeit in many instances the field may still be used the performance will be significantly below that which the players would deem acceptable.

Climatic conditions also have a major influence over natural turf. The variation in climatic conditions around the globe produces a consequential array of natural turf pitches. Natural turf pitches will vary from the best quality for Rugby to totally inadequate surfaces that can be dangerous to play on. This can be due to a variety of conditions from arid to flooded and arctic to equatorial. The world's climate produces both good and bad growing conditions for natural turf.

If the climate wasn't sufficient to generate problems other factors like stadia design and quality of groundsmanship also influence the overall quality of the natural turf.

There have been several proposals over the years as alternatives to natural turf these have included clay, shale, sand and artificial grass none of which previously met the needs of the game of rugby. However a new generation of artificial grass has appeared over the last 4-5 years that has attracted interest from the World of Rugby. The purpose of this specification is to act as a guideline document to the manufacturers of synthetic turf highlighting the needs of Rugby.

## 22.2 A Brief History of Artificial Turf

**1960s:** early in the 1960s Monsanto developed a nylon fibre that was tufted into a carpet. This product became known as ASTROTURF, which began the Artificial Turf business. This high-density carpet was used extensively for a number of sports.

**1970s:** all products have their limitations and as such a new range of products **appeared** on the market that allegedly allowed greater sliding over the surface. These products consisted mainly of sand-filled polypropylene tufted carpets of lower pile density than the original Astroturf products.

**1980s:** the product styles tended to polarize with nylon carpets used for Field Hockey and American Football and Sand-filled carpets used for recreational sports and multi-use games areas. Sand-filled systems were also used for Hockey, American Football and Association Football. The introduction of shockpads to absorb the impact of both the player and the ball improved the sand-filled systems but the products remained too fast and too abrasive for most contact sports.

**1990s:** saw the introduction of what became known as the 3rd Generation of Artificial **Turf**. This incorporated the use of long synthetic fibres infilled with rubber/sand granules. This looser structure had the shock-absorbing element in the upper part of the system.

## 22.3 General Philosophy

This Specification has been prepared to standardize the quality of the latest generation of artificial turfs for the game of rugby. This specification is deemed a development standard. As knowledge and experience is acquired from playing and training on the new surfaces then the information obtained will be used to amend/improve the specification to further the needs of rugby.

The Specification is an attempt to encompass the needs of the sport by imposing a testing program for artificial surfaces whereby manufacturers will be able to develop products to meet the needs of the game.

Players, coaches and club officials will benefit from the newest generation of artificial turf. The requirements set are based on the performance characteristics of natural grass. It is intended that the transition between natural grass and artificial turf should be as smooth as possible. The physical contact with the surface that is a fundamental part of the game of rugby should be such those players are as confident to do so on either type

of surface. The risk of friction burns should be minimal. It also anticipated that the normal footwear used by rugby players would also be acceptable on artificial turf.

## 22.4 Testing Protocol

An artificial surface is defined as the total system including the support layers. Therefore the testing of the surface will occur both within a Laboratory environment (type testing) and upon the completed installation. A product will undergo a series of tests to establish its suitability for installation. Once installed the performance requirements together with the construction requirements will be checked. Only a product that has completed both the laboratory and field-testing will it have filled the requirements of this specification. Accordingly only the completed fields will be permitted for use in Rugby Union.

<b>Step 1</b>	Bodies seeking to install or use an artificial playing surface must comply with the IRB requirements for the use of artificial playing surfaces (see Regulation 22 notes)
<b>Step 2</b>	Manufacturer submits sample to Approval Testing Institute
<b>Step 3</b>	Product is tested if it passes then it goes to step 4
<b>Step 4</b>	A pitch is installed with the laboratory approved product
<b>Step 5</b>	The installed pitch undergoes field testing
<b>Step 6</b>	If the product meets all the requirements then it is granted the Approval Status by the local National Union

### Laboratory Tests

The testing in the laboratory will identify the quality of the turf product. For each artificial turf to be tested, manufacturers must submit a representative piece of test material, typically 2.0m x 2.0m, to one of the selected laboratory test institutes.

### Field Tests

The performance of the artificial turf also depends upon the preparation of the sub-base and composition of the existing sub-soil. Therefore the

installed turf will not only be tested in laboratory but will also undergo field-testing as well. Please be aware that fieldtesting must be conducted within three months after installation of the pitch where practically possible.

Taking into consideration that the artificial weathering test takes several weeks, and that the field tests can only be performed after the installed pitch has settled, the final approval of a surface can take up to six months.

## **22.5 Test Procedures**

There are three basic categories that define the overall performance of a synthetic surface suitable for the game of football. These may be broadly defined as:

1. The reaction of a ball to the surface (Ball/Surface interaction)
2. The reaction of a rugby player to the surface (Player/Surface interaction)
3. The resistance of the surface to wear and tear, and the environment (Durability)

The series of tests would include:

### **Laboratory tests**

1. Identification tests
2. Durability
3. Climatic Resistance
4. Player /Surface Interaction
5. Ball /Surface Interaction

### **Field tests**

1. Construction tests (Slope, Evenness, and Base permeability)
2. Player /Surface Interaction
3. Ball /Surface Interaction

Field tests will be conducted within three months after installation of the pitch, where practicable.

## **22.6 Laboratory Tests**

## **22.7 Identification of the Product**

The purpose of the identification tests is to ensure that the system installed matches the product tested in the laboratory.

### Mass per unit area and tufts per unit area

**Tuft withdrawal force:** Measures how strongly the fibres are anchored into the backing of the carpet.

**Pile weight:** Is measured to ensure that not only the numbers of tufts are correct but also that the correct dTex of yarn has been used.

**Fibre Identification:** Fibres can be identified by its melting point and is called glass transition temperature (type of polymer).

**In-fill materials:** Defines the various types of in-fill available for incorporation in-between the fibres of the synthetic turf (particle size /particle shape /bulk density).

Optional where shock-absorbing elements are used under the carpet.

**Compressive Modulus:** Compressive Modulus is a measure of the force required to compress the shockpad per unit of compression (a shockpad is an impact-absorbing layer, which influences player comfort and ball response).

### Identification Methods

Characteristic	Surface or Component	Test Method
Mass per unit area	Synthetic Turf	ISO 18543
Tufts per unit area	Synthetic Turf	ISO 1763
Pile Weight	Synthetic Turf	ISO 2549
Tuft Withdrawal Force	Synthetic Turf	ISO 4919
Mass per unit area	Shockpad (if present)	EN 430
Compressive Modulus	Shockpad (if present)	ISO 604
Particle Size	Sand or Rubber	EN 933-1 and 933-2
Particle Shape	Sand or Rubber	EN 933-1 and 933-2
Bulk Density	Sand or Rubber	EN (number to be granted)
Fibre Identification	Synthetic Turf Yarns	DSC

## **Durability**

### **Abrasion Resistance**

The surface is artificially abraded (equivalent to five years of wear) and tested for the following: shock absorbency, vertical deformation and traction.



### **Joint Strength**

Measures the maximum force recorded to destroy the joints where they are sewn or joined with adhesive.



### **Climatic Resistance** **UV /Water /Heat**

Measures the colourfastness, abrasion resistance and joint strength. The rubber granules used in the in-fill materials shall also be exposed to a similar UV / Water/Heat regime as the synthetic grass. It is recommended

to use UVB tubes rather than UVA. The granulometry will be checked after the exposed samples have been placed in a ball mill.



### Product Stability

High stresses on the artificial surfaces are generated from the normal play during the game of rugby. To products used must be able to withstand these high tensile forces. Therefore it is necessary to impose a minimum requirement on the carpet backing to enable the products to withstand the forces that will occur.

### Pile Height

The nature of the game of rugby dictates the minimum pile height necessary to prevent the studs of the players penetrating through the in-fill material to the carpet backing and consequential damage to the synthetic turf fabric. It is therefore reasonable to impose a minimum pile depth that would support an in-fill depth of 50mm (when consolidated). It is therefore logical to impose a minimum pile height of  $65 \pm 2$ mm.

### Durability

Characteristic	Test Method	Requirements
Abrasion Resistance	EN 13672	Remains within the limits: - Shock Absorbency - Vertical Deformation - Traction - Abrasiveness
Joint Strength	EN 12228	> 25 N/mm
Product Stability	ISO 13934-1	> 25 N/mm

### Climatic Resistance

Characteristic	Test Method	Requirements
UV / Water / Heat	EN 13864	- Colour Fastness - Abrasion - Joint Strength

### Player /Surface Interaction

The surface can feel “hard” or “soft”. A hard surface can lead to injuries to the body by causing the joints (particularly ankles, knees, hips and spinal column) to compress which results in damage to the cartilage between the bones in the joints. Furthermore falling on a hard surface can cause bruising to soft tissue like muscles and extreme cases can cause fractures to bones. A soft surface can cause fatigue to the player running on the surface. The ability of a surface to absorb the impact of a player running on the surface is called its **Shock Absorbency**. The human body behaves like a spring when it makes contact with the surface. A spring when compressed absorbs a certain amount of energy. This energy is released when the pressure on the spring is released. Similarly a human being walking on a surface absorbs some of the impact when his foot makes contact with the ground, however once our human spring has been completely compressed any additional impacting force will feel like a physical shock. Walking on a surface our human spring can absorb most if not all of the shock. If we then jump on the surface it is likely that we completely compress our spring and the extra force we apply by jumping rather than walking gives a physical shock to the body. If we jump from sufficient height the shock can be so great as to do physical damage to our bodies.

The apparatus we use to measure Shock Absorbency incorporates these elements of the human spring and an impacting force. An anvil is placed on the surface to be tested, on top of the anvil is a spring that has the same spring coefficient as an “idealised” sports person, a weight is allowed to fall on the spring. (An "idealised sports person" requires certain assumptions, namely that he/she is an average individual. There is a difference between the impacting forces and spring coefficients when running of a lock forward and a fly-half. The idealised sports person is an average sports person of average weight.) The force received by the anvil is a function of the combination of the spring and the shock absorbing nature of the surface. The apparatus is first placed on a concrete slab and a value obtained. The apparatus is then placed on the surface to be tested and the new value obtained. The two values are compared and the reduction in the force received by the anvil due to the surface is recorded.

Hence the values are expressed as a % of the Force received when compared to concrete or Force Reduction. The property we are measuring is called Shock Absorbency; the apparatus we use to measure Shock Absorbency comes in various types one of which is the Berlin Athlete, the other is the Sport Floor Tester (as shown below). The measure of Shock Absorbency using these apparatus is called Force Reduction and is expressed as a percentage. The higher the percentage the “softer” the surface i.e. the more shock absorbing is the surface.

A second method of assessing the safety of a surface is to measure the HIC value. In contact sports the most serious injuries are those associated with head impacts. For many years the ability of surfaces to protect against head impact injuries have been assessed. The majority of the work has been undertaken on automobiles and children's safety surfaces where the risks of head impacts are a common occurrence. The game of rugby has a significant number of uncontrolled impacts (as opposed to the controlled impacts of running) on the surface. Hence the need for the ability of the surface to reduce potential injuries by absorbing the impacts of the players.

### Deformation/Surface Stability

The stability of a surface as a player runs across a surface has a significant effect on his stride pattern (often referred to as gait). A surface that deforms excessively gives the impression of being unstable. Consequentially the player will shorten his stride and his speed will reduce accordingly. A surface that does not deform is hard and unforgiving and



causes discomfort. We measure the stability of a surface by the amount of give in the surface, or **Deformation**. A weight is dropped onto a spring sitting on an anvil, as per the Berlin Athlete, but the weight and spring are different. Instead of measuring the force we measure the amount the

surface deforms in millimetres. The apparatus used is either the **Stuttgart Athlete** or the **Sport Floor Tester**, the property measured is **Vertical Deformation** and the units of deformation are millimetres. A large deformation of the surface would indicate a soft yielding surface, no or little deformation a compacted hard surface. In natural turf terms a waterlogged muddy surface would produce a large deformation a hard-baked dry surface relatively little or no deformation.

### Slip Resistance

If a rugby player is to run on a surface he needs to have sufficient foot holding for him to be able to accelerate and decelerate as necessary. A rugby player needs to accelerate from a standing start and equally well he needs to be able to stop quickly. This characteristic requires an interaction between the sole of the soccer shoe and the surface. The shoe has to gain sufficient grip on the surface to allow the propulsive forces of the take-off to be transmitted to the surface to allow the player to accelerate from standing. Similarly the player must gain sufficient grip from the surface to enable him to stop quickly. If there is insufficient grip the player will slip which could result in totally losing their balance and falling over with not only damage to their pride but also the danger of physical damage to muscle ligaments, soft tissue or even bones. Conversely too much grip is also dangerous. When a player attempts to stop forces are transmitted to joints and ligaments to decelerate the bodies forward momentum. If the forces are transmitted too quickly then there is a danger that too high a strain will be imparted to the joints and ligaments resulting in damage. The method used to assess this characteristic is referred to as **Slip Resistance** and on synthetic grass surfaces is measured using a **Modified Le Roux Pendulum Tester**. To prevent a player from slipping over we have a lower limit. To prevent injuries to joints and ligaments from too much grip we have an upper limit.



## Traction

Another aspect of the interaction between the shoe sole and the surface is the ability to change direction at will when running at speed. Rugby is not a unidirectional sport but is one involved in repeated changes of direction. The player therefore needs to change direction on a regular basis as the game moves around the field. The surface must allow the interaction with the shoe sole sufficient Traction to allow the player too repeatedly change direction. Similarly as for Slip Resistance there is a need for an upper and lower limit, insufficient and the player will loose footing, too much and muscle, ligaments and joints will be placed under too much stress and damage will accrue. This property of the surface is measure using a Traction Apparatus. The apparatus uses a Torque Wrench and measures the amount of Torque necessary to start the motion of a studded sole. The units of Torque are Newton metres abbreviated to Nm.



## Abrasiveness

More so than most sports the average rugby player spends significantly more time making contact with the playing surface with unprotected skin. Whether it is hands, knees, elbows or face the skin of the average rugby player will regularly make contact with the surface. It is necessary to assess the interaction of the surface with skin. This characteristic of the surface is considered in two different ways using the same apparatus. The abrasiveness of the surface is assessed which could produce a scratch or cut to the player's skin. The heat generated from the surface of the skin rubbing against the playing surface is also assessed. This could potentially result in a Friction Burn.

## Energy Restitution

A surface can have the required Shock Absorbing and Vertical Deformation characteristics but still be exhausting to run on. This reflects



the amount of energy returned to a player when running on the surface. One can imagine the difference between a mattress of feathers and a mattress containing springs. If you were to jump on the bed they would both feel soft and absorb the impact. The difference between the two mattresses is that the feather mattress will deform under the impact and absorb your energy whereas the sprung mattress you spring back in to the air returning the energy back to you (memories of childhood come flooding back). Surfaces can similarly do this. . Even natural turf will show differences between a soil that is saturated and one in ideal conditions or a grass length of 25mm compared to 100mm. The soil that is saturated absorbs more energy giving less back to the player than a soil in ideal condition therefore is more tiring to play on. This characteristic is referred to as **Energy Restitution**. Energy Restitution is the energy ratio of a body after impact to that before impact. The test procedures are currently under development and as a consequence only a limited amount of work has been done on this important characteristic of the surface. Therefore we can only set relatively wide limits to begin with until more information comes available to allow us to further refine this aspect of the performance standard. The method to be adapted is using the Berlin Athlete.

Characteristic	Test Method	Requirements
Shock Absorbency	EN	60-75%
H/C	EN 1177	>1.0m
Vertical Deformation	EN	Low Impact (Stuttgart Athlete) 4-10mm High Impact (Sport Floor Tester) 7-16mm
Traction	IRB Method	30-50 N.M.
Slip Resistance	NSF modified Le Roux	0.6 – 1.0 $\mu$
Abrasiveness		No scratches on film
Abrasiveness Friction $\Delta T$		Max. 5°C
Energy Restitution		30-50%

### Ball/Surface Interaction

Clearly if a ball bounces higher than expected the player may fail to control the ball or it may bounce over his head or bounce too low and pass under a raised boot. It is necessary therefore to measure the height to which a ball bounces when dropped from a certain specified height on to the surface. This would seem relatively simple, however, due to the variance from ball to ball due to the many factors in their construction no two balls will bounce to the same height from a particular surface except by good fortune. To overcome this problem the pressure can be adjusted to ensure that each ball bounces to the same height on the same surface for play. The **Vertical Ball Rebound** is measured by dropping a ball from a specified height and measuring the height it bounces to. It is not possible to achieve a consistent vertical bounce with a rugby ball therefore a round ball will be used for this purpose.

### Angled Ball Behaviour

Vertical Ball Rebound measures the resiliency of the surface experienced by the ball. Ball Roll (expressed as the speed of the surface) measures the pace of the ball over the surface and is related to the friction between the ball and the surface. There is also a further combined effect when a ball is struck into the air and strikes the surface at an angle referred to as Angled Ball Behaviour. The Angled Ball Behaviour is a complex interaction between the ball and the surface involving the friction between the ball and the surface on impact, the horizontal velocity and the vertical rebound. In practical terms a ball hit at an angle and speed, particularly a long ball, will bounce off the surface at a certain angle and speed. If the ball comes off the surface at a different trajectory and speed than anticipated it makes it difficult to control the ball. Hence the need, if possible, to measure the combined effects of angled ball behaviour. It is not possible to achieve a consistent angled ball behaviour with a rugby ball therefore a round ball will be used for this purpose.

### Requirements

Characteristic	Test Method	Requirements
Vertical Ball Rebound	EN 12235	30-50% (absolute)
Angled Ball Behaviour	-	50-70% at 50 km/h with an impact angle of 25°

## 22.8 Construction Requirements

It is necessary for the game of rugby football to impose certain constructional requirements.

- 1.0 The slope of the field should not be excessive or the ball will be unduly influenced. The players would find it difficult to perform at the top level. The spectators would also regard a field that had an excessive slope as aesthetically unacceptable.
- 2.0 The surface should have a degree of evenness to allow the players to run over the surface without affecting their stride on the surface. There are two evenness requirements, one to cover the macro evenness of the field and the other to prevent small steps in the surface sometimes observed for example on the seams of the synthetic carpet.
- 3.0 The base needs to be permeable to allow the water to freely drain through the system into the drains.

### Requirements

Characteristic	Test Method	Requirements
Slope	EN 22768-1	<1.0%
Evenness	EN 22768	<10mm under 3m
Evenness	EN 22768	<2mm under 300mm
Base Permeability	EN 12616	>180mm/hr

## 22.9 Selected Test Institutes

Testing institutes must be experienced and reproducible. Testing institutes can therefore only be chosen if they can demonstrate that they have the appropriate experience and ISO accreditation. The chosen laboratories must therefore be within the ISO schemes ISO/IEC 17025 1999 and ISO 4502. All the equipment used must be registered within those procedures. It is not sufficient to only have certain pieces of equipment complying with the demands and not others. Furthermore the same pieces of apparatus must be utilised in both the laboratory tests and the field tests to ensure consistency. Variations on equipment cannot be accepted. The test institutes must provide the appropriate certification to verify this and that the certification is maintained. The Test Institutes must also provide evidence of the experience of all the staff that would be used to undertake the testing. The use of inexperienced casual staff is not acceptable.

**22.10 Quality Assurance**

It will be the responsibility of the testing institutes to satisfy themselves that the product installed is the same as the product submitted for type testing. This will be achieved by undertaking the following steps.

- 1.0 All products manufactured must submit a certificate of compliance to the effect that the product dispatched is the same as the product submitted for type testing in accordance with procedures to be run under their ISO 9002 or similar scheme. These certificates must be dispatched and have been received by the institute before any product leaves the place of manufacture for the installation site.
- 2.0 If the testing institute has any reasonable cause for concern, it may request samples of the manufactured products for product identification.
- 3.0 Any minor change in the product profile must be proven to satisfy the requirements of the scheme. Any significant change will require a complete reevaluation of the product.
- 4.0 The client must demonstrate the ability to undertake the necessary maintenance requirements as stipulated in a separate document and the manufacturer's recommendations. This will entail a minimum of purchasing the necessary equipment and demonstrating that the appropriately qualified personnel are employed to utilise the machinery.
- 5.0 The fields will be regularly inspected over the lifetime of the facility to ensure the continuing suitability for the intended use of football. This will involve re-testing of the facility after a number of years of use to ensure the product remains within the requirements as defined above. The products may require a period of establishment before they have fully achieved their optimum playing characteristics. Field-testing will therefore take place within three months after pitch installation where climatic conditions allow.

**22.11 Future Steps**

The development of new technology in the field of artificial turf and the superior quality of the new designs makes it possible if not to promote, then at least to encourage the use of artificial surfaces in climates (including stadia microclimates) where natural grass is not an economic or environmental option. However, the option should be a perfectly manicured natural grass field to an artificial surface. However, the option should be available for those that have good reason to play on artificial turf.

It is impossible to predict what the future may hold. It can be assured however, that whatever development will take place will be so designed as to benefit the game of rugby.

The IRB notes that this standard is a developmental standard. It is subject to change at anytime and without notice.

## **22.12    Contacts**

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Compliance with this standard does not of itself confer immunity from legal obligations.

## **REGULATION 22. NOTES. REQUIREMENTS FOR USE OF ARTIFICIAL PLAYING SURFACES**

Groups or organisations wishing to install an Artificial Playing Surface which complies with the technical specifications set out below must comply with the following conditions:

1. Permission to install or use a pitch must be sought in writing in advance of installation or the use thereof (as the case may be) from the local National Union.
2. Those requesting the use of any Artificial Playing Surface for Rugby must ensure that the provisions of Law 1.1 are applied.
3. The permission shall, in the first instance, be granted for a defined period which shall ordinarily be a period of two years following which the local national Union may review the suitability/performance of the pitch in terms of safety and related matters.
4. The local national Union retains the absolute discretion in relation to the withdrawal of the permission and/or the imposition of further and/or amended conditions of permission to use the pitch.
5. This permission does not constitute and/or imply an endorsement by the IRB or the local national Union of the pitch or such pitches concerned.
6. The pitch may be used for International Matches providing that agreement by both teams is reached prior to a match. This agreement must ordinarily be arranged not later than 60 days before the date of the International Match.
7. The manufacturer(s) of the pitch in question shall not in any way seek or promote any association with the IRB.
8. The local national Union should ensure that all participants playing on a pitch understand and appreciate any inherent danger in participating in the sport on the pitch.
9. The local national Union must monitor and log injuries sustained by players participating on the pitch and report the same to the IRB on a quarterly basis using the form attached at Schedule One of these guidelines. It is the responsibility of the Union concerned to secure consent so that Players / Coaches / Medical Personnel can complete and return the form to the IRB. Please ensure that all necessary steps are taken

to ensure that the players in respect of whom information is provided consent to such information being presented to the IRB and its relevant Committees. The form attached (Appendix 1) should be modified as necessary in this regard.

10. The pitch manufacturer and installation company and as appropriate the body with responsibility for pitch maintenance the body shall indemnify and hold harmless the IRB and its associated companies and the local national Union, and its and their officers, employees and agents from and against all demands, claims, legal action, damages, costs (including without limitation) legal costs and the fees of any expert witnesses incurred in connection with any actions or proceedings, loss, interest or expenses in connection with any injury sustained by a player as a result of the pitch and/or any failure to comply with the specification and/or any other act or omission by or on behalf of the manufacturer and/or installer of the pitch and/or the body responsible for pitch maintenance (as the case may be).
11. The pitch manufacturer and installation company and as appropriate the body with responsibility for pitch maintenance has in place and shall maintain public liability insurance cover with a reputable insurer to cover any claim that may arise under Clause 10 above in the sum of STG£5m.
12. The IRB shall be entitled to impose such further conditions as it considers appropriate having regard to the nature of the pitch in question



**APPENDIX 1. RUGBY INJURY INFORMATION FORM  
ARTIFICIAL PLAYING SURFACES**

Match: \_\_\_\_\_ versus \_\_\_\_\_

or

Training: Yes  No  Venue: \_\_\_\_\_

Date/KO Time: \_\_\_\_\_ Referee: \_\_\_\_\_

Conditions: \_\_\_\_\_

Type of Surface/Manufacturer: \_\_\_\_\_

Player Name: \_\_\_\_\_ Position: \_\_\_\_\_

Nature and Cause of Injury: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Attention Required: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Period of Time Player Unable to Play Rugby: \_\_\_\_\_

Attending Doctor Name: \_\_\_\_\_

Signed by Union Medical Officer: \_\_\_\_\_

\_\_\_\_\_  
*(Print Name in Block Capitals)*

Date: \_\_\_\_\_