



ASTM and IAAF Force Reduction and Thickness Measurement Tools

Track Testing to ASTM and IAAF Standards



PROTECTIVE PADDING - MORE THAN JUST LOOKS

FACTS

ASET offers a number of ASTM and IAAF Tests for Track and Runway Surfaces

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ASET has conducted ASTM tests on track surfaces for several years, and we've recently expanded to include most of the tests required by IAAF for field certification.

We are currently evaluating the process of becoming an IAAF certified lab, and we may start that process in the future. However, for now we offer competitive advantages for testing new and existing tracks where IAAF certification is not required, but owners want to know that the track performs and protects as specified.

Track Testing Offered

There is significant harmony between the IAAF standard and ASTM F2157. All of the field tests offered by ASET Services comply with both standards.

- Force Reduction
- Vertical Deformation
- Friction / Texture Influence
- Evenness
- Thickness

Types of Synthetic Tracks

Synthetic track surfaces generally fall into 3 broad categories:

- Polyurethane – these systems involve the application of rubber granules and polyurethane binding components directly to the surface. These tracks may be a single layer or installed in multiple layers.
- Latex – these systems are similar to the polyurethane systems above, but they use a latex binder. These tracks may be installed in both single and multiple layers.
- Rolled goods – These track surfaces are manufactured in the factory and adhered to the substrate in the field.

A few millimeters matter, force reduction can be reduced by 50% with just a 2 or 3 mm reduction in thickness.

A few millimeters matter, a difference from 13 mm to 10 mm allows spikes to hit the base below the track surface.

A track may be level and flat and hide thickness variations, field testing helps detect out of tolerance areas.

All tracks age and change over time, maintenance testing allows schools to schedule and budget for replacement based on performance rather than simply appearance.

Introduction to Field Testing and Inspection of Synthetic Tracks

The IAAF has several key properties that are to be evaluated during a field test or inspection. The following is an introduction to those properties:

- ➔ **Imperfections:** This refers to bubbles, fissures, delamination, uncured areas, etc. Imperfections can have negative effects on the durability and performance of the system.
- ➔ **Evenness (4m):** There must be no high or low areas beneath a 4m straight edge exceeding 6 mm. Uneven surfaces can compromise athlete safety.
- ➔ **Evenness (1m):** There must be no high or low areas beneath a 1m straight edge exceeding 3 mm.
- ➔ **Thickness:** Thickness is measured using a 3-prong calibrated thickness

probe. Systems that are too thin will not be able to provide required shock absorption and vertical deformation levels.

- ➔ **Shock Absorption:** represents the ability of the surface to reduce impact forces felt by athletes. It is measured using an instrumented drop mass.
- ➔ **Vertical Deformation:** represents the ability of the surface to move under load. It is measured using an instrumented drop mass and position sensors.
- ➔ **Friction:** Represents the ability of the surface to provide adequate friction to prevent slippage in dry and wet conditions. It is measured using a pendulum friction test device.



*Field Testing:
Hayes Track at
Indiana University*

Contact Us

Our company works with manufacturers to develop safer, better performing products. We work with architects to test and inspect new surfaces to verify that they perform and protect as specified. We work with owners to make sure that their entire facility offers a safe, comfortable place to play and compete.

The following are just some of the items that we test and inspect:

- Indoor Courts (basketball, volleyball, etc.)
- Walk/jog/run tracks (indoor and outdoor)
- Playground Surfaces and Equipment
- Dance Surfaces
- Protective padding and mats
- Basketball backboard systems and components.

We perform tests in our climate-controlled lab, and on-site, and select the option that fits your project and budget. The following are just some of the reasons our field testing and inspection services have been used:

- ➔ **Evaluate Damage:** We can provide quantitative evaluations of the damage done to surfaces by events like flooding.
- ➔ **Validate Repairs:** We can verify that repaired areas provide the same performance as existing areas and as specified.
- ➔ **Commission Testing:** We verify that newly installed surfaces meet specified performance and safety levels.
- ➔ **Guide Repair/Replace/Upgrade Decisions:** Field testing provides schools with performance data that can aid them in deciding what to do with existing surfaces.

For Information on 'True Performance' Specifications visit:

www.aset-true-performance.com

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No Surface can Prevent Every Injury

Injuries will happen, and no surface can prevent every injury. However, modern surfaces are safer than ever when they perform as designed and specified.