SYNTHETIC TURF COUNCIL
EMEA

Shockpads

The Guarantee for Durability in Artificial Turf

2019 EDITION

1 Introduction

In 2013 FIFA - with the assistance of the ESTC Shockpad Group - carried out a study to investigate whether shockpads & elastic layers aid the performance longevity of football turf surfaces.

Tests were carried out by Labosport on 40mm football turf systems with a variety of different shockpads and a 60mm system without a shockpad. The dynamic properties of the football turf systems were measured before and after simulated play undertaken on a Lisport XL.

In the first series of tests, all samples were maintained every 1,000 cycles, with a total of 7,000 conditioning cycles being undertaken. In the second series of tests, no maintenance was undertaken during the test in an attempt to replicate what is often seen in practice. Throughout the test programme the samples were kept dry with no attempt to replicate the effects of rain, snow, solar radiation, etc. The results are therefore considered to be indicative.

2 Results

Figure 1 shows the limited changes in shock absorption when the football turf samples are regularly maintained.

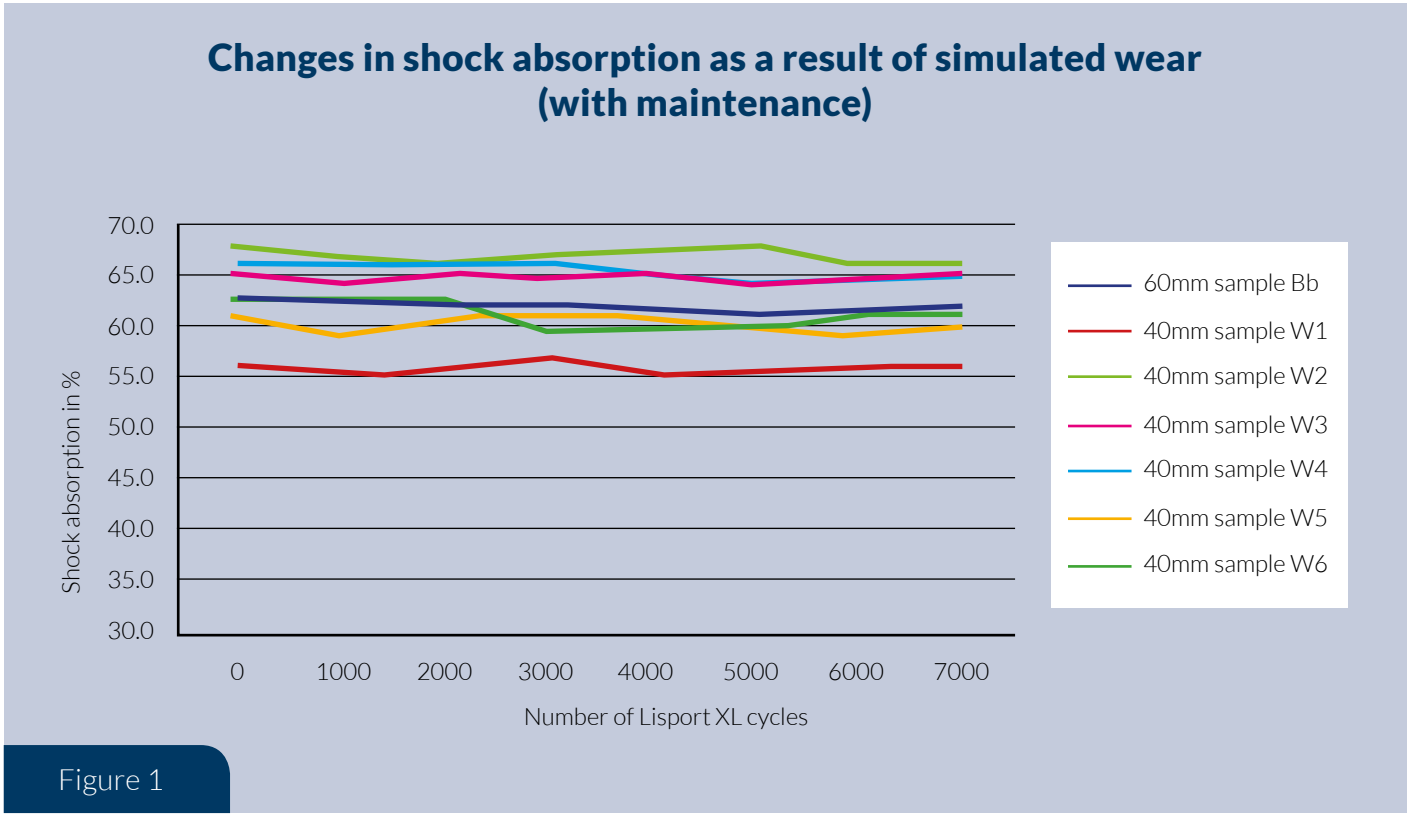

Figure 1

Figure 2 shows the results when the samples were not maintained; which is considered to represent reality for many community-use facilities.

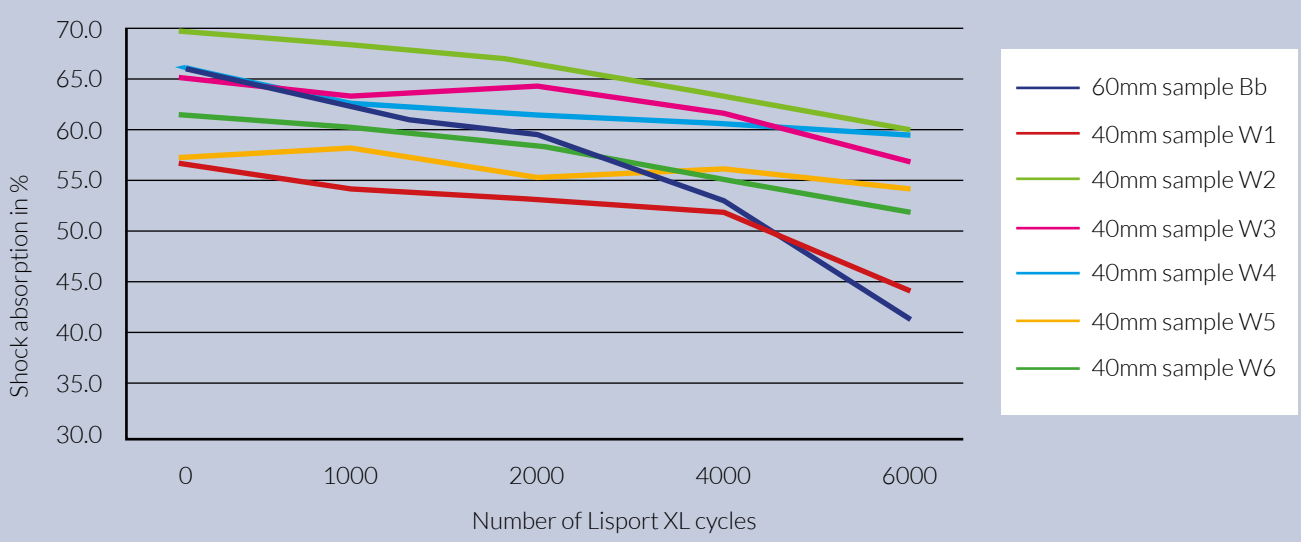

Figure 2

The shock absorption of five samples with shockpads stays almost at its initial levels of shock absorption. The sample without a shockpad and one sample with a shockpad (that was borderline at the start of the test) show a reductions in shock absorption to levels that are below those recommended by FIFA in the FIFA Quality Programme for Football Turf.

3 Conclusions

1. Proper maintenance = all systems work
2. No or minimum maintenance = systems without shockpads or those designed to only just initially satisfy the specified requirements fail to maintain adequate long term player protection. Systems with good quality shockpads will maintain the performance.
3. Tests undertaken were shock absorption, vertical deformation, HIC, ball rebound, rotational resistance – all the values measured confirm the above statements

Statement from ESTC Working Group

When maintenance is not regularly undertaken, in order to keep performances at a high level and to reduce the risk of injury to players, a good quality shockpad is strongly recommended.

To ensure good quality shockpads and elastic layers are used, specifiers should refer to “The Performance Guide for Shockpads” produced by the ESTC working group in 2013 (see www.estc.info)

The working group and its members are available to answer any questions with regards to the quality of the shockpad needed to attain the best possible result.

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