

Technical Report

Evaluation of the effects of simulated wear on
samples of synthetic turf infilled with
Flexsand
undertaken for
Fairmount Minerals

Summary

Extended simulated wear tests have been undertaken a sample of long pile synthetic turf infilled with Flexsand. Particle gradings of the infill materials and visual assessments of the carpet pile were made before and the wear tests. This report describes the test undertaken and records the effects of the simulated wear.

This report may not be used for commercial purposes, unless it is reproduced in its entirety. The results are valid only for the complete system as described in this report.

1. Client

Fairmount Minerals
11830 Ravenna Road
Chardon,
OH 44024
USA

2. Test specimens

The test specimen comprised a sample of 50mm long pile fibrillated synthetic turf in-filled with approximately 30kg/m² of Flexsand; to give a free pile depth of 20mm.

The test specimen was placed directly into the Lisport wear machine; no shockpad was used.

3 Test Programme

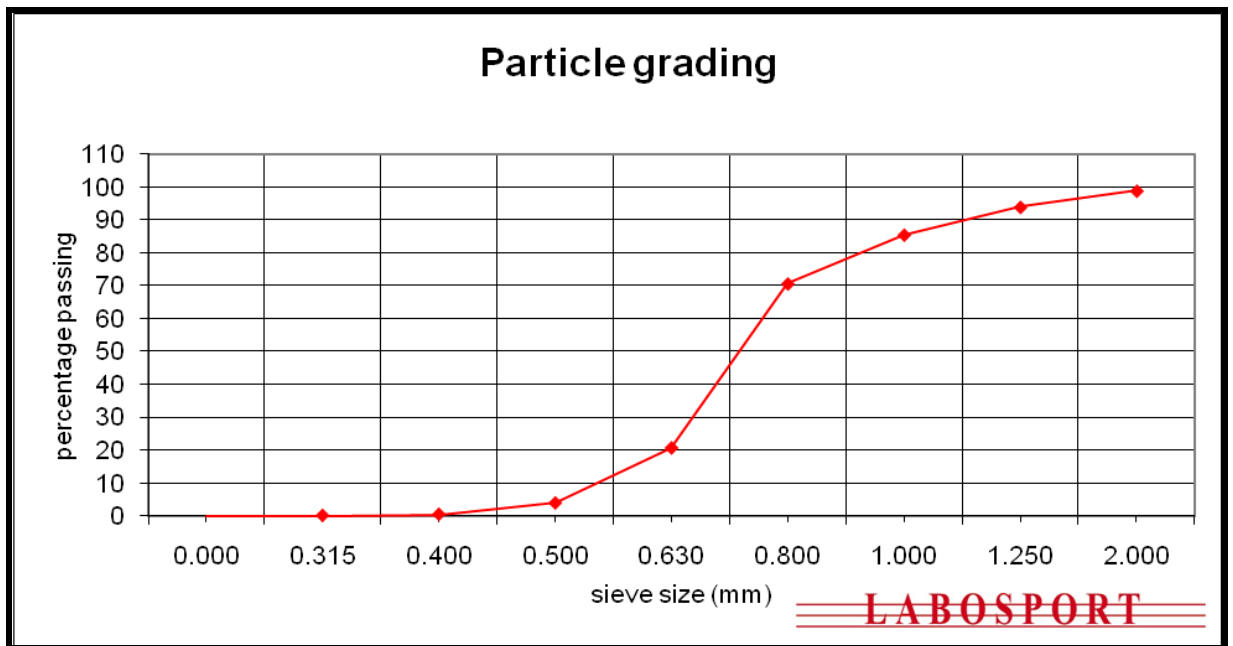
The synthetic grass sample was subjected to simulated wear using a Lisport[®] wear machine. The test procedure was based on the method of test described in EN 15336 *Surface for sports areas – Exposure for synthetic turf to simulated wear* but the number of cycles was extended to 20,000 cycles; 20,000 cycles is the number of cycles adopted by FIFA to replicate the types of use often seen on high use community fields. The Lisport[®] was set to have (optional) lateral movement as specified in the test procedure. After each 2,500 cycles the Lisport was stopped to allow displaced infill to be replaced (no additional infill being applied).

Samples of new and Lisport conditioned Flexsand were analysed to determine their particle grading in accordance with EN 933-1.

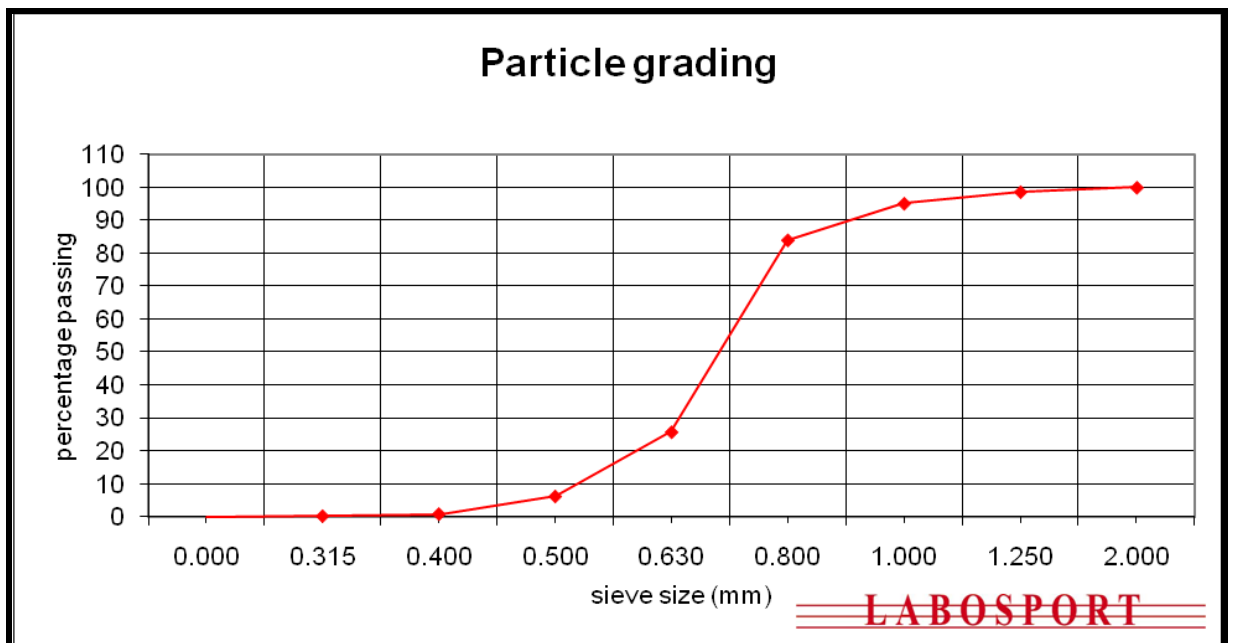
Photographs of the synthetic turf sample were taken before and after the simulated wear test.

4 Results and observations

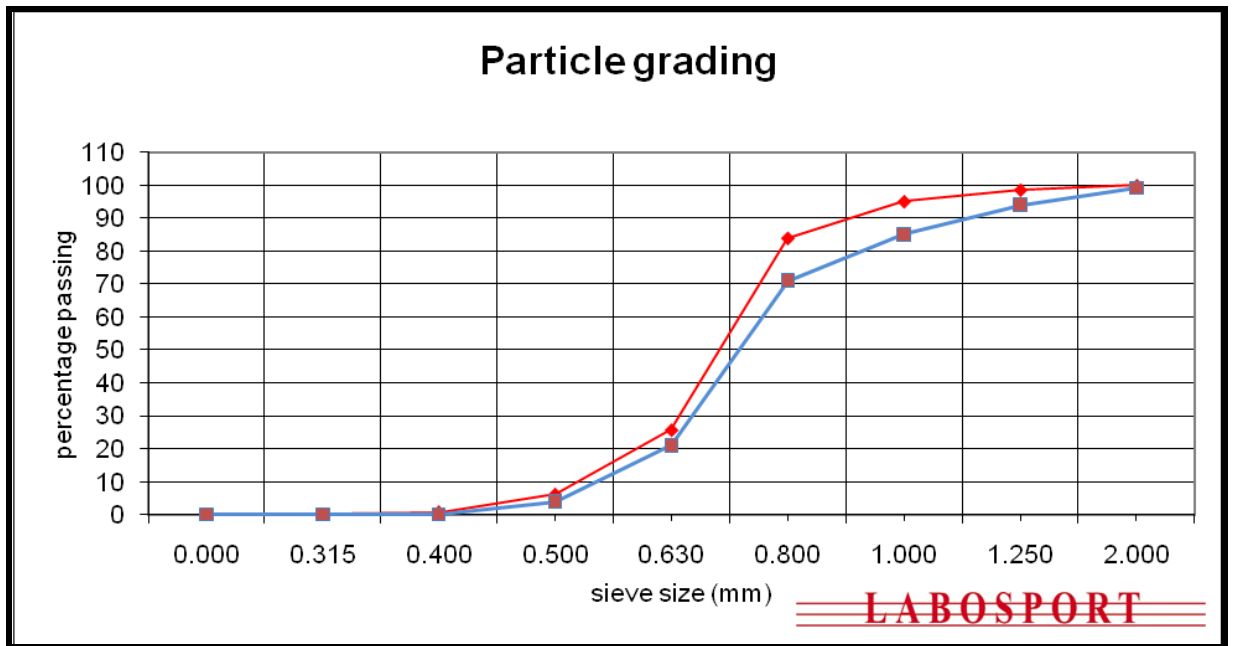
Particle grading of Flexsand before test



Particle grading after 20,200 cycles on Lisport simulated wear machine



Graph showing particle grading before and after simulated wear test



Blue = infill grading before test Red = infill grading after test



Photograph showing sample before test



Photograph of carpet after 20,000 cycles simulated wear. Flexsand sticking to pile due to static electricity; damping sample prevents this phenomenon from occurring.



Photograph of fibres before and after 20,000 cycles simulated wear

5 Conclusions

The results show only a minor change in the particle grading of the infill as a result of the simulated wear.

The extended simulated wear test has not resulted in excessive fibrillation of

wear of the fibres.

Reported by



.....
Alastair L Cox
Director