



**EN 12616:2013
SURFACES FOR SPORTS AREAS – DETERMINATION OF WATER INFILTRATION RATE**

ISS30 DRIED SILICA INFILL SAND

CLIENT	Irwins Quality Aggregates Ltd
CLIENT ADDRESS	55 Gortgonis Road Coalisland Co Tyrone BT71 4QG
CLIENT CONTACT	Alastair Harrison (Sales Director)

REPORT NUMBER	LSUK.21-0237-B1	
REPORT STATUS	Final	
REVISION NUMBER & DATE	1.0	16/04/2021
REPORTED BY		David Rigby Technical Director
APPROVED BY		Professor David James Managing Director

SUMMARY OF REPORT / FINDINGS	<p>In accordance with EN 12616:2013, water infiltration rate tests have been carried out on test specimen(s) of stabilising infill used in the sports and play sector.</p> <p>The test specimen(s) submitted were tested under laboratory conditions to the requirements of EN 12616:2013 on the 16/04/2021.</p>
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SCOPE OF TESTING / PROJECT	<p>Water was ponded within two concentric cylinders that had been sealed onto or hammered into the sports surface.</p> <p>The outer cylinder was used as a buffer area to prevent the lateral flow of water from the inner cylinder. The rate of entry into the sports surface from the inner cylinder was measured and expressed in millimetres per hour.</p> <p>The tests were conducted using a double ring infiltrometer to one of the following methods:</p> <p>“Method A” was used for synthetic, textile, synthetic turf and bound mineral sports surfaces.</p> <p>“Method B” was used for natural turf.</p> <p>“Method C” was used for unbound mineral sports surfaces.</p>
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TEST PROCEDURE / STANDARDS	<p>EN 12616:2013 – Surfaces for sports areas – Determination of water infiltration rate</p> <p>EN 12229:2014 – Surfaces for sports areas – Procedure for the preparation of synthetic turf and needle-punch test pieces</p> <p>EN ISO/IEC 17025:2017 – General requirements for the competence of testing and calibration laboratories</p>
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PRODUCT (DETAILS / DESCRIPTION)	<p>Silica sand referred to as “ISS30 Dried Silica Infill Sand”.</p>
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TEST CONDITIONS	<p>The test specimen(s) were tested at $23 \pm 2^{\circ}\text{C}$ and $50 \pm 10\%$ relative humidity and conditioned for a minimum of 24 hours prior to testing commencement.</p> <p>The water had a temperature of 12.0°C at the commencement of testing.</p> <p>The test specimen(s) were tested in combination with any supporting layers to be used in service and using the recommended method of attachment in accordance with the manufacturer’s instructions.</p> <p>For “Method A” the test specimen(s) were selected so that the infiltrometer was positioned with the minimum number of drainage holes possible within the two rings. The infiltrometer was sealed to the test specimen(s) using a silicone rubber.</p> <p>For “Method B” the infiltrometer was hammered into the test specimen(s) to a depth of $50 \pm 5\text{mm}$.</p> <p>For “Method C” the infiltrometer was hammered into the test specimen(s) to a depth of $25 \pm 5\text{mm}$.</p>
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TEST RESULTS	WATER INFILTRATION RATE				
ISS30 Dried Silica Infill Sand					
Product type	Stabilising infill		Test method	Method C	
Test position	1	2	3	4	5
Measured result	8,191mm/hr	8,696mm/hr	10,420mm/hr	10,619mm/hr	10,762mm/hr
Average result	9,738mm/hr				

DISCUSSION	<p>The test specimen(s) submitted were found to have water infiltration rate values of:</p> <p>ISS30 Dried Silica Infill Sand 9,738mm/hr</p>
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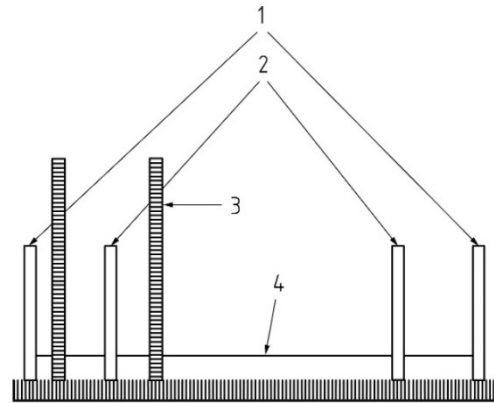
CONCLUSIONS

The test specimen(s) submitted were tested under laboratory conditions to the requirements of EN 12616:2013.

The results relate only to the test specimen(s) received and tested.

APPENDIX

Diagram of double ring infiltrometer



- Key**
- 1 outer cylinder
 - 2 inner cylinder
 - 3 scale
 - 4 water level