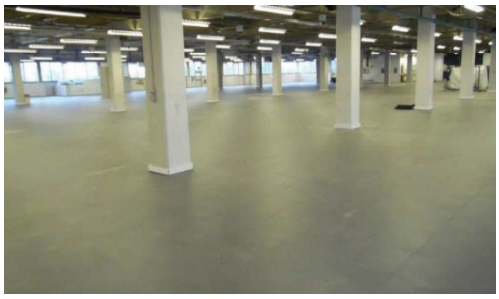
EP0502048 ESD-ProFloor PF 50



R-Tile 5mm/7mm ESD tile offers a dissipative flooring system which is also anti-static.
Static dissipative means that the resistance to ground is less than 1 x 10^9 ohm (1 Gohm).
These performance figures ensure that the floor complies with the intemationally recognised standard IEC 61340. R-Tile 5mm/7mm ESD flooring has been tested to BS EN 61340-5-1:2007.
(See attached Certificate)

R-Tile 5mm/7mm ESD is offered with a life guarantee that it will retain its anti-static performance and, if grounded in accordance with our instructions and maintained properly, the tiles will create a safe conductive floor surface that can be used as your primary ground.

Manufacturing Technique

R-Tile 5mm/7mm ESD flooring is manufactured using an injection-moulding process during which thousands of tiny metal fibres are added to the compound. This method ensures that the fibres are evenly distributed throughout each tile guaranteeing the permanent ESD performance of the tile (10^5 - 10^7).

ESD flooring is available in dark grey and black only.

This is to Certify that

3 samples of

R-Tek Manufacturing Ltd.

Floor tiles

7mm TXT/DG-RTILE/ESD

were tested under dry laboratory atmosphere conditions (12±3%r.h.) and found to be compliant with the requirements of the standards

IEC 61340-5-1:2007
EN 61340-5-1:2007

Full details of the trial and results are documented in ESL Report No. 2011-0209.

Dr Jeremy Smallwood
Managing Director and Principal Consultant
Test Certificate 2011-0209 05 May 2011

Electrostatic Solutions Ltd

13 Redhill Crescent, Southampton, SO16 7BQ, United Kingdom.
+44 (0)23 8090 5600 info@electrostatics.net www.electrostatics.net

Stand: 27.08.24

DESCRIPTION			
Total thickness	EN ISO 24346 [EN 428]	mm	5mm /7mm
Weight	EN ISO 23997 [EN 430]	kg/m²	5mm-7.6KG /M2 7mm-10KG /M2
Tile size	EN ISO 24342 [EN 427]	mm	508x508
CLASSIFICATION			
Norm / Product specification	-	-	EN ISO 10582 EN 6491
European classification	EN ISO 10874 (EN 685)	class	34 / 43
Fire rating	EN 13 501-1	class	B_{fl}-s1
Electrical Resistance	IEC61340-5-1:2007	kV	10^5 - 10^7
	EN 61340-5-1:2007		
PERFORMANCE			
Wear resistance	EN 660.2	mm^3	≤ 3
Wear group	NF 189	group	T
Dimensional stability	EN ISO 23999 [EN 434]	%	≤ 0.20 NO CURLING
Residual indentation	EN ISO 24343-1 [EN 433]		≤0.05
Castor chair test (type W)	ISO 4918 (EN 425)	-	NO CHANGE
Shore hardness	EN ISO 868	HA	≥ 92
Thermal conductivity	EN ISO 10456 (EN12524)	W/(m.K)	0.25
Colour fastness	EN 20 105 - B02	degree	≥ 6
Slip Resistance	DIN 51130	-	R10
Chemical products resistance	EN ISO 26987 [EN 423]	-	OK
ENVIRONMENTAL ACCREDITATIONS			
TVOC after 28 days	ISO 16000-6	µg/ m^3	< 100
Certification	-	-	Floorscore®
TECHNICAL ACCREDITATIONS			

BRE-Green Guide Ratings A+

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ESD Target Zone Explanation Table

Resistance To Low - Minimum Resistance Should Be 25000 Ohms						Target Zone for a safe and compliant ESD Floor Safe Zone = between 35 x 10^4 (35,000 ohms) and 35 x 10^6 (35 million Ohms)	Resistance to High - Maximum Level of Resistance = 35 million ohm				
Conductive Range							Static Dissipative Range				
0	10	100	1k	10k	25K	100k	1 million	10 million	35 Million	100 million	1 Billion
	10x1	10x2	10x3	10x4	25 x 10 x 4	10x5	10x6	10x7	3.5 x 10 x 7	10x8	10x9

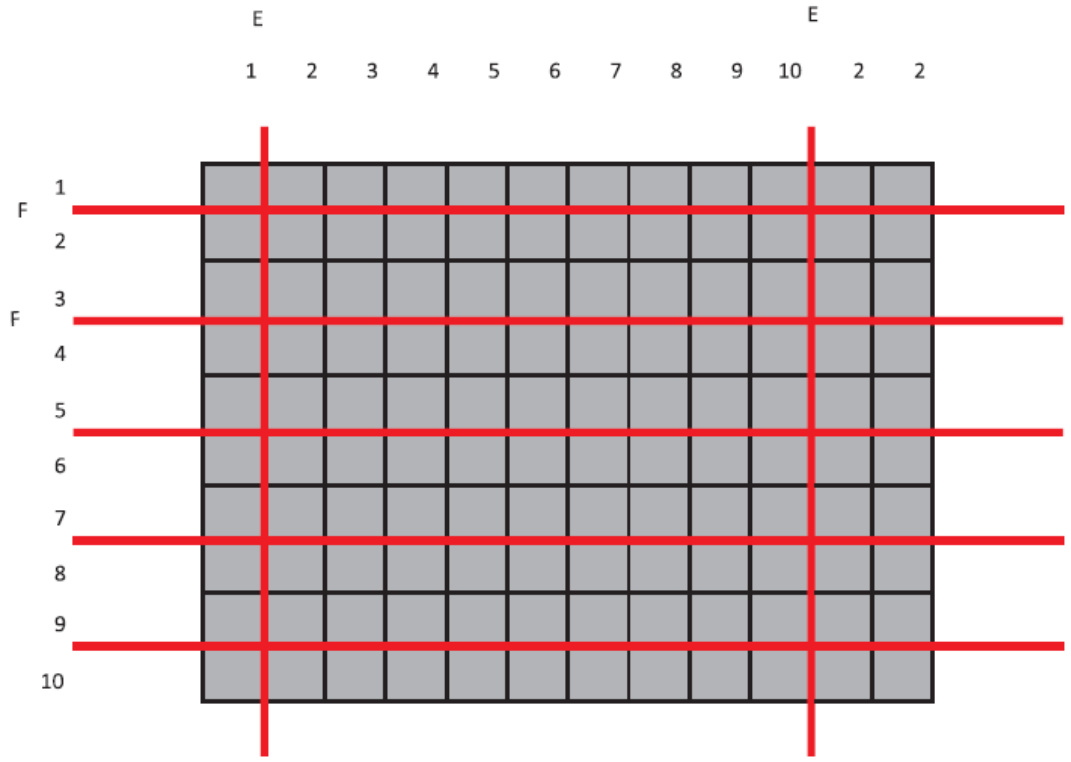
ESD Test Results – Scientific Notation - How to interpret your reading

Ohms (Ω)	Notation / Interger	KΩ	MΩ	GΩ	Description
100	10^2	0.1	0.0001		= CONDUCTIVE
1000	10^3	1	0.001		
10000	10^4	10	0.01		
100000	10^5	100	0.1		
1000000	10^6	1000	1	0.001Gig	
10000000	10^7	10000	10	0.01Gig	= DISSIPATIVE
100000000	10^8	100000	100	0.1 Gig	
1000000000	10^9	1000000	1000	I Gig	$10^{9\text{ to }}10^{11}$ = Anti-static

Installation instructions for ESD Tiles

In order to achieve a fully ESD flooring the tiles need to be grounded. This is achieved by laying a grid of black conductive tape under the floor tile system.

The installed tiles are then laid one meter apart (ie two tiles) in a vertical direction (EE) and in the opposite direction horizontally every five meters apart (ie ten tiles) (FF) on top of this grid system.



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Ensure that the conductive tape is under the dove tail interlocking joins. (Photo 3)

One grounding point is needed for every 80m2 of R-Tile ESD and/or one grounding point for each separate section/room of R-TILE ESD installed. This grounding point is achieved using a special earthing tile that has a metal stud which connects to the under side of the tile and an earthing cable which is then connected to the main earthing structure of the building. (See photo 4 & 5)

Place the earthing tile in the corners of the room or along the wall to avoid creating a trip hazard.

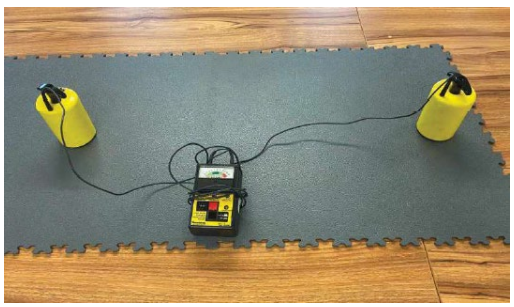
Photo 3

Photo 4

Photo 5

How to test your ESD-Floor

Surface Resistance
Using the appropriate test equipment test the floor across two or more tiles and take a minimum of 9 readings across random spots across the floor. You should havea reading between 10^5 to 10^7 to comply with ISO 61340 international standard.



Use test weights and not probes to test the floor, the probes do not provide sufficient surface contact to provide an accurate reading.

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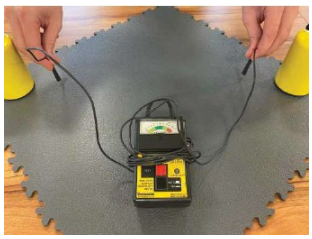
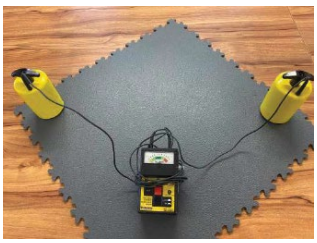
How to test your ESD-Floor

Surface Resistance

Wrong test method - Do not use prong contacts to test the floor, insufficient surface contact.

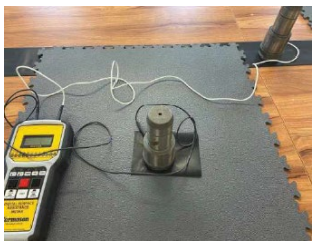


Correct Test Method - Use weights or suitable test plate to ensure good surface contact.

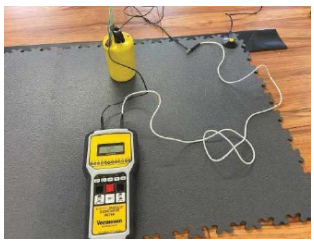


Resistance to ground

Correct Test Method 1 - Test from the floor first to your grounding point to test the resistance to ground of the floor -
Target Resistance to be less than 1 x 10^6. i.e.
Suitable for use within an EPA zone / electronics manufacturing facility.



Correct Test Method 2 - Test from the floor next to your grounding point to test the resistance to ground of the floor via the grounding cord with the lmeg resistor - Target Resistance to be between 1 x 10^6 and 3.5 x 10^7. i.e. The safety zone in the event of an electrical short circuit.



ESD-PROTECT GmbH
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www.esd-protect.de
Tel. 02689 92870-0
info@esd-protect.de
Fax 02689 92870-24

Certificate of Registration

Certificate of Registration

nqa

This is to certify that the Quality Management System of:

R-Tek Manufacturing Ltd

259 Battleford Road, Benburb, BT71 7NP, United Kingdom

applicable to:

The Manufacture of Injection Moulded Flooring Solutions and Car Mats for Private Sector Clients

has been assessed and registered by NQA against the provisions of:

ISO 9001:2015

This registration is subject to the company maintaining a quality management system, to the above standard, which will be monitored by NQA

Managing Director

Certificate No.	IMS-2309
ISO Approval Date:	4 July 2017
Reissued:	25 May 2020
Valid Until:	3 July 2023
EAC Code:	14

UKAS MANAGEMENT SYSTEMS 015

Stand: 27.08.24

Certificate of Constancy performance

warringtonfire
Proud to be part of element

Notified body No. 1121

Certificate of constancy of performance
1121-CPR-DA5000

In compliance with *Regulation 305/2011/EU of the European Parliament and of the Council of 9 March 2011* (the Construction Products Regulation or CPR), this certificate applies to the construction product

"R-Tile Interlocking PVC Floor Tile"

A PVC interlocking floor tile, manufactured in the following grades:

- 4mm Industrial grade – Chequered - textured finish
- 4mm Industrial grade – Chequered - studded finish
- 5mm Commercial grade – Flat - textured finish
- 5mm Commercial grade – Flat - studded finish
- 5mm Commercial grade – Flat - slate finish
- 5mm Industrial grade – Chequered - textured finish
- 5mm Industrial grade – Chequered - studded finish
- 7mm Industrial grade – Chequered - textured finish
- 7mm Industrial grade – Chequered - studded finish

Intended use: Floorcovering

Product Performance

Harmonized technical specification - EN 14041:2004 / AC:2006			
Essential characteristics	**Performance**	**Method**	**Report reference**
Reaction to fire	B_{FL}-S1	EN 13501-1	Classification reports: WF 190593, WF 190594 & WF 330485, WF 412759 Extended application reports: WF 330486, WF 412757
Content of pentachlorophenol	NPD	Verification not required	N/A
Emission of formaldehyde	E1	Manufacturers declaration	Not used in manufacturing process
Water-tightness	NPD	EN 13553	NPD
Slipperiness	Textured - 0.50 to 0.75 Studded - 0.69 to 0.70 Slate - 0.55 to 0.57 Chequered - 0.58- to 0.61 Flat - 0.44 to 0.45	EN 13893	FL00182952/1009/1/2/3/4/5/6/7
Electrical behaviour	2.1 to 4.2	EN 1815 & EN 1081	FL00182952/1009/1
Thermal conductivity	NPD	EN 12524 / EN 12667	-

NPD – No Performance Determined.
Product Specification (See Page 3)

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warringtonfire
Proud to be part of element

Certificate of constancy of performance
1121-CPR-DA5000

Produced for

R-Tek Manufacturing Ltd.
259 Battleford Road
Benburb
Co. Armagh
BT60 1HW

and produced in the manufacturing plant

E/067
This is coded format and the information is held by the Notified Body

This certificate attests that all provisions concerning the assessment and verification of constancy of performance and the performances described in Annex ZA of the standard(s)

EN14041:2004/AC:2006

under system 1 *of AVCP* are applied and that

the product fulfils all the prescribed requirements set out above.

This certificate was first issued on **07/01/14**, revised on **04/06/19** and will remain valid as long as the test methods and/or factory production control requirements included in the harmonised standard, used to assess the performance of the declared characteristics, do not change, and the product, and the manufacturing conditions in the plant are not modified significantly.

Valid until: 03/06/2022

Paul Duggan
Certification Manager
Warrington Certification and Testing Limited trading as Warringtonfire
Holmesfield Road, Warrington, Cheshire, WA1 2DS,UK

CE

Stand: 27.08.24