

ESD Flooring for Static Control



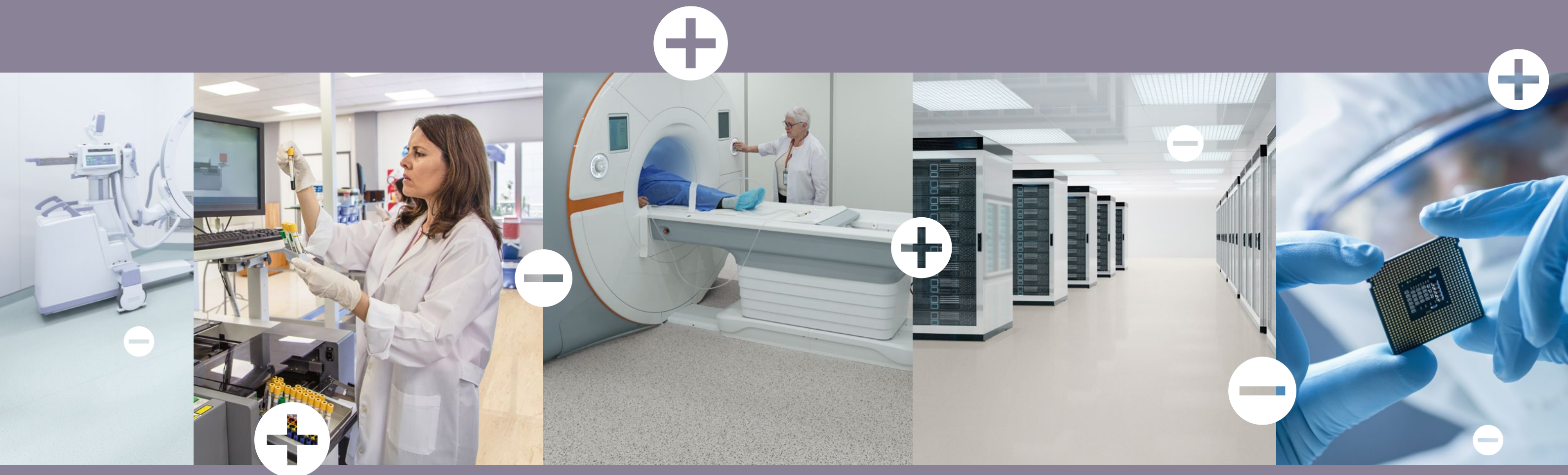
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ESD Flooring for Static Control

Polyflor ESD flooring is a durable homogeneous vinyl sheet and tile collection, designed to control electrostatic discharge (ESD) and particle emission in critical ESD protected areas (EPA). Protecting sensitive electrical equipment is paramount in facilities such as electronics manufacturing, healthcare, life sciences and pharmaceuticals, as well as server rooms and data centres.

The collection comprises Static Dissipative (SD) and Electrostatic Conductive (EC) ranges, of which sheet and tile options are available to suit a variety of ESD requirements.



Understanding Electrostatic Discharge (ESD)

Static electricity is everywhere and at its most impressive it creates thunderbolts and lightning, which we can hear and see. However, most commonly, it is generated by friction and separation of two insulating materials, causing an electric charge build up on the surface of the materials, with one becoming positively and the other negatively charged. A discharge occurs when these charges find access to the ground or another unbalanced element.

Electrostatic discharge is a problem that can't be ignored, and have serious consequences in specialist environments.

Associated Risks

Electrostatic charges try to balance themselves out and in doing so Electrostatic Discharge (ESD) occurs immediately upon contact with a conductive element. This static is not directly harmful to humans, but it can be serious to sensitive electronic equipment. In situations where uncontrolled buildup and discharge is created, a variety of problems can occur and potentially lead to the complete failure of equipment. This may prove costly and perhaps even dangerous.

Significant areas for consideration include **electronics manufacturing, cleanrooms, pharmaceuticals, server rooms and data centres, healthcare, ordnance manufacture and storage.**

Protecting People

Most importantly people need to be protected, and whilst static is not directly dangerous to humans, threat to health and safety can arise through fires and explosions caused by insufficient control in ESD environments. This could occur in certain **production, healthcare and life science facilities** where there potentially may be gases, flammable liquids, powders or vapours. Examples of very high risk ATEX (ATmospheres EXplosives) environments include **munitions, explosives and military equipment factories.**

Protecting Technology

Controlling static in certain high tech manufacturing environments can be critical in protecting equipment and processes. Static discharge events as low as 10 volts have the potential to damage devices and impact manufacturing. Damage or disruption to highly technical equipment in sectors such as **healthcare, electronics manufacturing, laboratories and data centres** can prove very costly and commercially damaging.

*Static buildup can lead to **complete failure** of sensitive equipment*



Managing ESD

Taking control with Polyflor flooring

In order to limit charges and control discharge - and therefore reduce the cost and safety risks from static electricity - Polyflor has a broad range of vinyl flooring options for static control environments. Within specialist applications, an electrical performance specification must be identified at the outset and will confirm whether standard Polyflor vinyl will suffice or if one of our specialist ESD control ranges should be specified.

ANTISTATIC

Standard Polyflor vinyl flooring ranges offer insulative and antistatic properties to EN 1815 and do not generate static charges above 2kV.

DISSIPATIVE

Polyflor **Static Dissipative (SD)** floor coverings disperse static electricity discharge for controlled flow (higher resistance).

CONDUCTIVE

Polyflor **Electrostatic Conductive (EC)** flooring rapidly discharges static electricity (low resistance).

Earthing Points & Grounding Solutions

Specifying the correct flooring solution from Polyflor plays a critical role in the overall performance of a static controlled environment.

Additionally, a range of other solutions may need to be considered to achieve the performance specification required in ESD controlled areas. These include but are not limited to:

- Earthing points for people
- Earthing points for equipment
- Static control packaging and sealing
- Humidity controllers
- Ionisation controllers

Grounding People

Wrist and heel straps can be used, but typically Electro-Conductive (EC) flooring and the use of conductive footwear plays a main role in safely managing static electricity.

Grounding Equipment

Grounding equipment is also important, and can include workbenches, tools and castor chairs, for instance.



FOOTWEAR



WORKING SURFACES



GROUNDABLE WHEELS



WRIST STRAPS

Polyflor's Trusted ESD Flooring for Static Control

Polyflor's trusted ESD floor coverings have been specifically engineered to provide static control, by facilitating a uniform flow of static electricity directly to a grounding point.

This specialist flooring category covers all major applications and includes Static Dissipative (SD), Electrostatic Conductive (EC), and Conductive ROF floor coverings.

All combine static control properties with Polyflor renowned design and hardwearing qualities.

Wherever there is a static control requirement, Polyflor is a trusted flooring partner with a long history of expertise in ESD flooring solutions, providing peace of mind and helping to protect valuable equipment and people, whether that's in a healthcare, manufacturing, laboratories or IT setting.

	Specialist ESD Control Overview				
	Static Dissipative			Electrostatic Conductive & ROF	
	Palettone SD	Finesse SD	Polyflor SD	Finesse EC	Conductive ROF
Format	Sheet	Sheet & Tile	Sheet & Tile	Sheet & Tile	Sheet
Design	Non-directional - 6 colours	Non-directional - 5 colours	Marbleised - 6 colours	Non-directional - 5 colours	Solid black
Electrical Resistance	1.0 x 10 ⁶ – 1.0 x 10 ⁹ ohms	1.0 x 10 ⁶ – 1.0 x 10 ⁹ ohms	1.0 x 10 ⁶ – 1.0 x 10 ⁹ ohms	10 ⁴ – 10 ⁶ ohms	< 5.0 x 10 ⁴ ohms
Loads	Heavy loads	Heavy loads	Heavy loads	Heavy loads	Heavy loads
Slip Resistance	R9	R9	R9	R10	-
Cleanroom	Fraunhofer certified	Fraunhofer certified	Fraunhofer certified	Fraunhofer certified	-
Maintenance	Excellent resistance to chemicals	Excellent resistance to chemicals	Excellent resistance to chemicals	Excellent resistance to chemicals	Excellent resistance to chemicals
Environment	Recyclable	Recyclable	Recyclable	Recyclable	Recyclable

GOOD TO KNOW!

Finesse SD, Polyflor SD and Finesse EC are available in 608 x 608mm tiles.

Finesse SD and Polyflor SD tiles are perfect for raised access panels.

Finesse SD
Daybreak 5820

Polyflor Static Control Benefits

Polyflor Static Control ranges are homogeneous in construction, to ensure that critical ESD properties are present throughout the product.

Performing for Years

All Polyflor ESD floor coverings are UK manufactured at our original production site in Whitefield, Greater Manchester, where we have been producing quality and long-lasting vinyl flooring since the 1950s.

Can be used in conjunction with static control clothing, footwear and wrist straps, as well as with special workstations, ionisers and humidity controllers.

Can be hot welded to create a completely impervious floor and can be installed with a coved skirting for easy cleaning.

Palettone SD, Finesse SD, Polyflor SD and Finesse EC are tested and certified to Fraunhofer cleanroom standards.

Non-porous, hygienic finish providing excellent resistance to dirt and bacteria.

Polyflor ESD ranges are tested to all relevant international ESD standards.

Easy and economical to maintain.

Excellent abrasion and chemical resistance, for lasting appearance and performance in vital use areas.

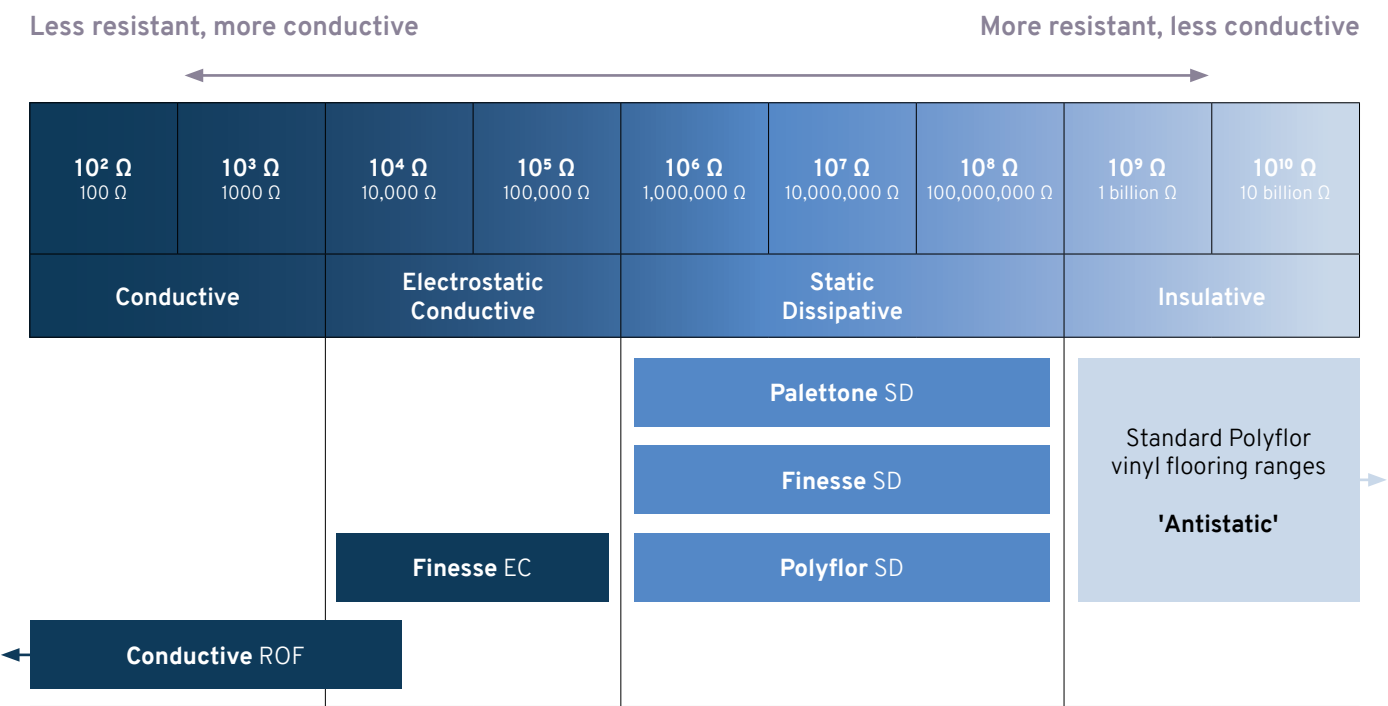
Made in the UK. Producing quality and long-lasting vinyl flooring since the 1950s.

GOOD TO KNOW!

Polyflor's expertise in this field has been developed over many years and we are well known in the market for our technical support.

Our Ranges Explained

Polyflor’s Static Control products are designed to minimise or eliminate the risk of Electrostatic Discharge (ESD) and it is essential that the correct range is selected for the intended application.



An electrical performance specification must be identified at the outset. This will not only stipulate the maximum and minimum electrical resistance requirements of the installed floor, but will also identify the method of test, the electrodes to be used, the method of measurement and the testing environment.

WE ARE HERE TO HELP!

Whenever specifying a Polyflor ESD vinyl floor covering, Polyflor strongly recommends discussing your requirements with our Customer Technical Services Department (CTSD). They will advise on which products are best suited for the particular application, and where no specification has been identified, will advise on the specifications used in similar installations and industries.

 +1 905 364 3000

 sales@polyflor.ca



Discuss your requirements with our Customer Technical Services Department (CTSD)

Choosing the Correct Polyflor Ranges

Specification can vary across use areas. Standard Polyflor ranges may be adequate in certain specialist facilities, where SD and EC ranges could also be suitable. The Polyflor floor covering used is dependent on activity and equipment, not just the facility in isolation.

The table below illustrates the possible crossover of Polyflor ranges within an ESD setting. *This is for indication purposes only.*

	Standard Polyflor ranges	Palettone SD	Finesse SD	Polyflor SD	Finesse EC	Conductive ROF
HEALTHCARE						
Imaging suites (non-MRI)	✓	✓	✓	✓	✓	
Pathology labs	✓	✓	✓	✓	✓	
Equipment storage areas	✓	✓	✓	✓	✓	
MRI suites (with non-ferrous EC systems)	✓	✓	✓	✓	✓	
Operating theatres with advanced electronics	✓	✓	✓	✓	✓	
Anaesthetising suites	✓	✓	✓	✓	✓	
Intensive-care units	✓	✓	✓	✓	✓	
Equipment sterilization zones	✓	✓	✓	✓	✓	
CLEANROOMS & CONTROLLED ENVIRONMENTS						
Pharmaceutical labs	✓	✓	✓	✓	✓	
Chemical analysis labs	✓	✓	✓	✓	✓	
University research spaces	✓	✓	✓	✓	✓	
Semiconductor fabrication (wafer production, chip assembly)	✓	✓	✓	✓	✓	
Pharmaceutical manufacturing clean zones	✓	✓	✓	✓	✓	
Biotechnology labs	✓	✓	✓	✓	✓	
Medical device production suites	✓	✓	✓	✓	✓	
Operating theatres	✓	✓	✓	✓	✓	
MRI & imaging suites	✓	✓	✓	✓	✓	
IT ROOMS & DATA CENTRES						
Data centres		✓	✓	✓	✓	
Server rooms		✓	✓	✓	✓	
Network hubs		✓	✓	✓	✓	
Telecom switching stations		✓	✓	✓	✓	
ELECTRONICS MANUFACTURING						
Consumer electronics assembly		✓	✓	✓		
Quality control zones		✓	✓	✓		
PCB assembly lines						✓
Microchip & processor production						✓
Repair & testing stations						✓
TECHNICAL WORKSPACES						
Calibration labs		✓	✓	✓		
Repair benches		✓	✓	✓		
Engineering test areas		✓	✓	✓		
EXPLOSIVE & HAZARDOUS MATERIAL (ATEX) ZONES						
Ammunition & ordnance handling						✓
Fuel storage & transfer areas						✓
Chemical processing plants						✓
OTHER ENVIRONMENTS						
Equipment sterilization zones					✓	
Robotics & automation zones					✓	
Aerospace component manufacturing					✓	
Optical & laser equipment areas					✓	

If unsure, please speak to our helpful CTSD team on +1 905 364 3000 or sales@polyflor.ca.

SD

Static Dissipative

DISSIPATIVE flooring is formulated to enable controlled electrostatic discharge in sensitive areas like data centres and healthcare facilities, such as scanner rooms, X-ray suites and operating theatres. Also ideal in telecommunications installations, computer rooms and electronics manufacturing.

Polyflor Static Dissipative (SD) products are engineered for use where static control is required, but the resistance level of the floor does not need to be as low as that provided by a conductive flooring. These products comply to EN 14041. They should record a resistance to earth that shall not exceed 1×10^9 ohms.



Palettone SD
Frosted Glass 8606SD

SD range data

Product Format & Size	Standard	Palettone SD	Finesse SD	Polyflor SD
Gauge	ISO 24346 (EN 428)	2.0mm	2.0mm	2.0mm
Total Weight	ISO 23997 (EN 430)	3030g/m ²	3030g/m ²	3400g/m ²
Sheet	Coverage Per Roll 40m ²	2m x 20m	2m x 20m	2m x 20m
Tile	Coverage Per Box 5.17m ²	-	608mm x 608mm	608mm x 608mm

Performance Requirements

General Performance	ISO 10581 ASTM F1913 ASTM F1700	Conforms Conforms -	Conforms Conforms Conforms	Conforms Conforms Conforms
Use Area (Loads)	ISO 10874 (EN 685)	Heavy (34, 43)	Heavy (34, 43)	Heavy (34, 43)
Slip Resistance	DIN 51130 / DIN EN 16165 Ann. B EN 13893	R9 Class DS	R9 Class DS	R9 Class DS
Binder Content	EN ISO 10581	Type I	Type I	Type II
Abrasion Resistance	EN 660-2	Group P	Group P	Group M
Reaction to Fire	EN 13501 ASTM E648 ASTM E662 CAN/ULC 102.2 AS ISO 9239-1	Class Bfl-S1 Class 1 <450 FSR ≤300; SDC ≤500 >8.0 kW/m ²	Class Bfl-S1 Class 1 <450 FSR ≤300; SDC ≤500 >8.0 kW/m ²	Class Bfl-S1 Class 1 - >8.0 kW/m ²
Castor Chair (Continuous Use)	ISO 4918 (EN 425)	Suitable	Suitable	Suitable
Flexibility	ISO 24344 ASTM F137	(Method A) Pass 20mm ø 0.25" Pass	(Method A) Pass 20mm ø 0.25" Pass	(Method A) Pass 20mm ø 0.25" Pass
Light Fastness	ISO 105-B02 (Method 3)	≥6	≥6	≥6

ESD Performance

Static Electrical Propensity	EN 1815	≤2.0kV Classified as 'antistatic'	≤2.0kV Classified as 'antistatic'	≤2.0kV Classified as 'antistatic'
Electrical Resistance	EN 1081 R ₁ /R ₂ IEC 61340-4-1	1.0 x 10 ⁶ - 1.0 x 10 ⁹ ohms 1.0 x 10 ⁶ - 1.0 x 10 ⁹ ohms All products require minimum 40% RH	1.0 x 10 ⁶ - 1.0 x 10 ⁹ ohms 1.0 x 10 ⁶ - 1.0 x 10 ⁹ ohms	1.0 x 10 ⁶ - 1.0 x 10 ⁹ ohms 1.0 x 10 ⁶ - 1.0 x 10 ⁹ ohms

Sustainability

Recyclable		100%	100%	100%
Recycled Content		25%	25%	25%
EPD	EN 15804	Product Specific	Product Specific	Product Specific
REACH		Compliant	Compliant	Compliant
Indoor Air Comfort Gold		Eurofins certified product	Eurofins certified product	Eurofins certified product
FloorScore		Certified	Certified	Certified
Finnish M1 Classification		Certified	Certified	Certified
Responsible Sourcing	BES 6001	Certified	Certified	Certified

Maintenance Performance

Resistance to Chemicals	ISO 26987 (EN 423)	Excellent	Excellent	Excellent
Alco Hand Gels	Compatible for use with most commonly used alco-based hand gels			
Steam Cleaning	Suitable for steam cleaning on a periodic basis			

All Polyflor commercial sheet vinyl ranges provide a continuous, impervious and hygienic flooring solution which can be confidently cleaned in accordance with recommended maintenance procedures and approved maintenance products. The implementation of an effective cleaning regime is the most important defence against infection. Regular light maintenance is more cost-effective than periodic heavy maintenance and more beneficial to the floor covering.

Hygiene

Bacterial Resistance	ISO 846 Part C	Does not favour growth	Does not favour growth	Does not favour growth
Cleanroom	ISO 14644-1	Fraunhofer Class 4	Fraunhofer Class 5	Fraunhofer Class 5

For further technical information please speak to our Customer Technical Services Department on +1 905 364 3000, or email sales@polyflor.ca.

Palettone SD

Sheet: 2m x 20m

Key Features & Benefits

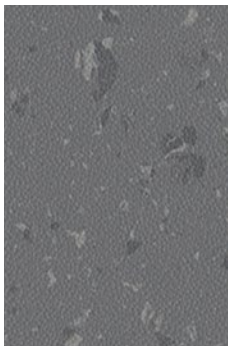
- 6 non-directional colour ways
- Homogeneous sheet
- Static Dissipative (SD) properties for static control
- Fraunhofer certified for cleanroom applications
- Heavy loads
- Use Polyflor approved conductive adhesives
- 100% recyclable, 25% recycled content
- Exceptionally low VOC certification
- Product Specific EN 15804 EPD
- BES 6001 certified for responsible sourcing



8606SD
Frosted Glass
LRV 53 w/r 8606
NCS S 2002-G50Y



8607SD
Dove Tail
LRV 38 w/r 8607
NCS S 3502-R



8608SD
Pencil Lead
LRV 18 w/r 8608
NCS S 6005-B20G



8611SD
Weekend Sky
LRV 64 w/r 8611
NCS S 0907-R90B



8615SD
Woodland Air
LRV 70 w/r 8615
NCS S 1005-G20Y



8620SD
Harvest Air
LRV 69 w/r 8620
NCS S 1005-Y30R

Please note: Actual samples should be seen before colour selection is made.



Palettone SD
Weekend Sky 8611SD

Finesse SD

Available in two formats:  Sheet: 2m x 20m  Tile: 608mm x 608mm

Key Features & Benefits

- 5 non-directional colour ways
- Homogeneous sheet & 608mm x 608mm tile – the preferred size for use on access flooring
- Static Dissipative (SD) properties for static control
- Fraunhofer certified for cleanroom applications
- Heavy loads
- Use Polyflor approved conductive adhesives
- 100% recyclable, 25% recycled content
- Exceptionally low VOC certification
- Product Specific EN 15804 EPD
- BES 6001 certified for responsible sourcing



5800
Cascade
LRV 38 w/r 5200
NCS S 3010-R80B



5820
Daybreak
LRV 49 w/r 3130
NCS S 2500-N



5830
Lodestone
LRV 33 w/r 3140
NCS S 4000-N



5840
Woodglade
LRV 41 w/r 5240
NCS S 3005-G20Y



5860
Moonscape
LRV 55 w/r 5260
NCS S 2005-Y40R

Please note: Actual samples should be seen before colour selection is made.



Polyflor SD

Available in two formats:  Sheet: 2m x 20m  Tile: 608mm x 608mm

Key Features & Benefits

- 6 marbleised colour ways
- Homogeneous sheet & 608mm x 608mm tile – the preferred size for use on access flooring
- Static Dissipative (SD) properties for static control
- Fraunhofer certified for cleanroom applications
- Heavy loads
- Use Polyflor approved conductive adhesives
- 100% recyclable, 25% recycled content
- Exceptionally low VOC certification
- Product Specific EN 15804 EPD
- BES 6001 certified for responsible sourcing



5030
Steel Grey

LRV 32 w/r 9120
NCS S 4502-G



5050
Ocean Blue

LRV 41 w/r 5350
NCS S 3005-R80B



5060
Flaxen

LRV 60 w/r 5330
NCS S 1010-Y30R



5070
Golden Sand

LRV 43 w/r 2500
NCS S 3020-Y10R



5080
Teal

LRV 30 w/r 2610
NCS S 4010-B70G



5110
Silver Grey

LRV 49 w/r 2090
NCS S 2500-N

Please note: Actual samples should be seen before colour selection is made.



"We operate heavy-duty electronic sorting machinery to provide an efficient service, and the use of this machinery can lead to a buildup of static electricity. The SD flooring dissipates the static charge safely while providing a resilient surface that can handle the foot traffic of staff, and the mail trolleys used to transport post and packages around the facility."

Royal Mail, Norwich

Polyflor SD
Silver Grey 5110

EC

Electrostatic Conductive & Conductive ROF

CONDUCTIVE flooring rapidly conducts static electricity, ideal for high-risk electronics manufacturing, (wafer fabrication, product assembly, inspection and storage), laboratories and cleanrooms. The range is also recommended for healthcare facilities including operating theatres, anaesthetising areas, intensive-care units and radiology departments – areas where gases and/or electronic equipment are used during medical procedures.

Conductive ROF (Royal Ordnance Factory) is specifically engineered for defence establishments.



Finesse EC
Corn Husk 8993

EC range data

Product Format & Size	Standard	Finesse EC	Conductive ROF
Gauge	ISO 24346 (EN 428)	2.0mm	2.0mm
Total Weight	ISO 23997 (EN 430)	3250g/m ²	3300g/m ²
Sheet	Coverage Per Roll 40m ²	2m x 20m	2m x 20m
Tile	Coverage Per Box 5.17m ²	608mm x 608mm	-

Performance Requirements

General Performance	ISO 10581 ASTM F1913 ASTM F1700	Conforms Conforms Conforms	Conforms Conforms -
Use Area (Loads)	ISO 10874 (EN 685)	Heavy (34, 43)	Heavy (34, 43)
Slip Resistance	DIN 51130 / DIN EN 16165 Ann. B EN 13893	R10 Class DS	- Class DS
Binder Content	EN ISO 10581	Type I	Type II
Abrasion Resistance	EN 660-2	Group P	Group M
Reaction to Fire	EN 13501 ASTM E648 ASTM E662 CAN/ULC 102.2 AS ISO 9239-1	Class Bfl-S1 Class 1 <450 FSR ≤300; SDC ≤500 >8.0 kW/m ²	Class Bfl-S1 Class 1 - - -
Castor Chair (Continuous Use)	ISO 4918 (EN 425)	Suitable	-
Flexibility	ISO 24344 ASTM F137	(Method A) Pass 20mm ø 0.25" Pass	-
Light Fastness	ISO 105-B02 (Method 3)	≥6	-

ESD Performance

Static Electrical Propensity	EN 1815	≤2.0kV Classified as 'antistatic'	≤2.0kV Classified as 'antistatic'
Electrical Resistance	EN 1081 R ₁ /R ₂ IEC 61340-4-1 IEC 61340-4-5 BS 2050 JSP 482	10 ⁴ - 10 ⁶ ohms * 10 ⁴ - 10 ⁶ ohms * <100v ** - -	<5.0 x 10 ⁴ ohms - - <5.0 x 10 ⁴ ohms <5.0 x 10 ⁴ ohms

*Tested at 100v **Result when tested with conductive shoes, tested according to IEC 61340-4-3 and compliant to the requirements of IEC 61340-5-1

Sustainability

Recyclable		100%	100%
Recycled Content		25%	25%
EPD	EN 15804	Product Specific	-
REACH		Compliant	Compliant
Indoor Air Comfort Gold		Eurofins certified product	-
FloorScore		Certified	-
Finnish M1 Classification		Certified	-
AqBB/ABG		Pass	-
Responsible Sourcing	BES 6001	Certified	-

Maintenance Performance

Resistance to Chemicals	ISO 26987 (EN 423)	Excellent	Excellent
Alco Hand Gels	Compatible for use with most commonly used alco-based hand gels		
Steam Cleaning	Suitable for steam cleaning on a periodic basis		

All Polyflor commercial sheet vinyl ranges provide a continuous, impervious and hygienic flooring solution which can be confidently cleaned in accordance with recommended maintenance procedures and approved maintenance products. The implementation of an effective cleaning regime is the most important defence against infection. Regular light maintenance is more cost-effective than periodic heavy maintenance and more beneficial to the floor covering.

Hygiene

Bacterial Resistance	ISO 846 Part C	Does not favour growth	-
Cleanroom	ISO 14644-1	Fraunhofer Class 5	-

For further technical information please speak to our Customer Technical Services Department on +1 905 364 3000, or email sales@polyflor.ca.

Finesse EC

Available in two formats:  Sheet: 2m x 20m  Tile: 608mm x 608mm

Polyflor Finesse EC is an Electrostatic Conductive (EC) range, which has been engineered for use where ESD protection is required. When tested to the recommended test methods, Finesse EC has a resistance to earth of $\leq 10^6$ ohms (when tested in accordance with EN 1081 at minimum 100v.)

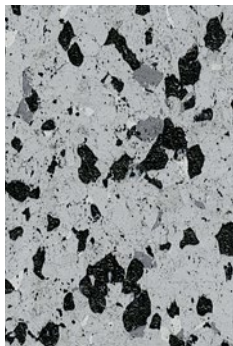
Key Features & Benefits

- 5 non-directional colour ways
- Homogeneous sheet & 608mm x 608mm tile
- Electrostatic Conductive (EC) for ESD protection
- Achieves $10^4 - 10^6$ ohms for electrical resistance
- Fraunhofer certified for cleanroom applications
- R10 enhanced slip resistance
- Heavy loads
- Performance is not affected by temperature or humidity
- Use Polyflor approved conductive adhesives
- 100% recyclable, 25% recycled content
- Exceptionally low VOC certification
- Product Specific EN 15804 EPD
- BES 6001 certified for responsible sourcing



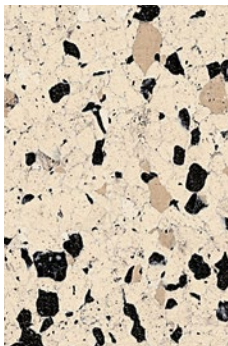
8991
Birchwood

LRV 40 w/r 8991
NCS S 2500-N



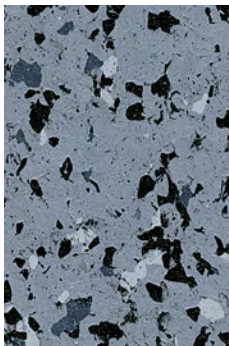
8992
Silver Leaf

LRV 33 w/r 8992
NCS S 2005-Y20R



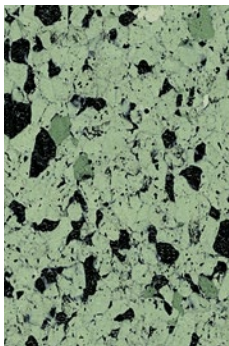
8993
Corn Husk

LRV 55 w/r 8993
NCS S 2005-Y50R



8994
Water Ripple

LRV 23 w/r 8350
NCS S 4020-R80B



8995
Hedgerow

LRV 29 w/r 8995
NCS S 4010-G30Y

Please note: Actual samples should be seen before colour selection is made.



100% RECYCLABLE
CONTAINS **25%** RECYCLED MATERIAL



Conductive ROF

 Sheet: 2m x 20m

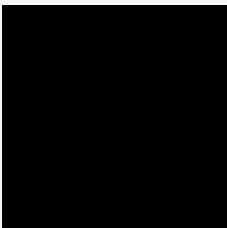
Polyflor Conductive ROF (Royal Ordnance Factory) is a conductive flooring, specifically engineered for use in ordnance factories - in manufacturing areas, and where explosives and flammable agents are stored.

When tested to the recommended test methods, Polyflor Conductive ROF has a resistance to earth between 0 and 5×10^4 ohms. It is engineered to meet the electrical parameters of JSP 482, ensuring a low electrical resistance to prevent and dissipate static electricity charges. This makes it suitable for use in sensitive environments where electrostatic discharge could cause damage to equipment or pose extreme safety risks.

It does not provide protection from short circuit on a 240/250 volt mains, so installation and switching in these rooms are critical, and must be considered prior to any handover.

Key Features & Benefits

- 1 solid colour way
- Homogeneous sheet
- Heavy loads
- Not affected by temperature or humidity
- Electrostatic Conductive (EC) for specific ESD protection in ordnance factories
- Use Polyflor approved conductive adhesives and polishes
- 100% recyclable, 25% recycled content



5980
Black

LRV 5 w/r 8640
NCS S 8502-R



Finesse EC
Birchwood 8991

Sustainability

Polyflor ESD ranges are all manufactured at our original manufacturing site in Greater Manchester, UK, where we have a long history as both a manufacturer and employer within our local community for over 100 years.

Our ESD ranges contain up to 72% natural material, are REACH compliant and have low VOC certification for healthier indoor air quality.

Raw materials used in our ranges are predominantly locally sourced from ISO 14001 approved suppliers. These supplier commitments are part of Polyflor's objectives to Environmental Management System ISO 14001 and BES 6001 for Responsible Sourcing.

Polyflor ESD ranges contain up to 25% recycled material, reducing the need for virgin raw materials and eliminating waste to landfill. The ranges are also 100% recyclable via Recofloor, our co-founded recycling scheme operating across the UK, as well as various recycling outlets available internationally.

All ranges are extremely durable with a recommended service life of 30 years and are low maintenance during the in-use phase, minimising where environmental impact can be the most significant. Regarding the life cycle, environmental product declarations (EPD) are available. For more information on sustainability credentials, visit our dedicated web page www.polyflor.ca/sustainability.



Recycling ESD with Recofloor

Project: **STI Poynton**
Location: **Cheshire, UK**
SQM: **1,400m²**
Product: **Polyflor SD**



Bramhall Flooring was initially engaged to replace the existing flooring with 1,400 sqm of Polyflor SD vinyl in 5110 Silver Grey, at the electronics manufacturing site in Cheshire.

The contractor demonstrated the ease of implementing Recofloor to collect, return and recycle material from STI Poynton by placing large Recofloor bulk bags on site to collect all the uplifted vinyl with less than 3mm of adhesive for meeting Recofloor specifications. The installation offcuts from the new vinyl were also bagged separately and collected from site for recycling.

In total, around 18 pallets (approximately 6 tonnes) of waste Polyflor vinyl flooring were recycled from both project phases.

"We totally buy into Recofloor and it was easy to use on both phases of this project. We rang up, asked for the bags and while we brought some back to our premises, most were collected from site as the project continued.

"We believe that recycling helps the environment and doesn't contribute to overloaded landfill sites. Using Recofloor also saves us money on skips. We have been asked several times to provide evidence that we recycle as this helps clients with their BREEAM ratings – and Recofloor membership helps us to do this."

Julian Normie
Managing Director, Bramhall Flooring



All recycled waste vinyl goes back into new products – including flooring. Operating across the UK and Ireland, the scheme collects post-installation flooring and offcuts from a wide variety of projects in diverse sectors.

Installation

Correct installation in line with Polyflor guidelines is of paramount importance, particularly within highly technical static control environments where performance is critical.

The Polyflor Customer Services Technical Department (CTSD) has a wealth of knowledge in correct specification and installation for specialist static control environments. Additionally, standard installation procedures for our ESD ranges can be found in the Polyflor Technical Manual, which covers the following key areas of appropriate installation.

- 1 Subfloor**
Floor preparation requirements including moisture testing.
- 2 Adhesive**
The importance of using the correct Polyflor approved conductive adhesives.
- 3 Earthing**
Guidance for the installation of copper or brass strips, enabling the end user to test to earth.

Accessories

Polyflor offers the following accessories to assist with installation requirements:

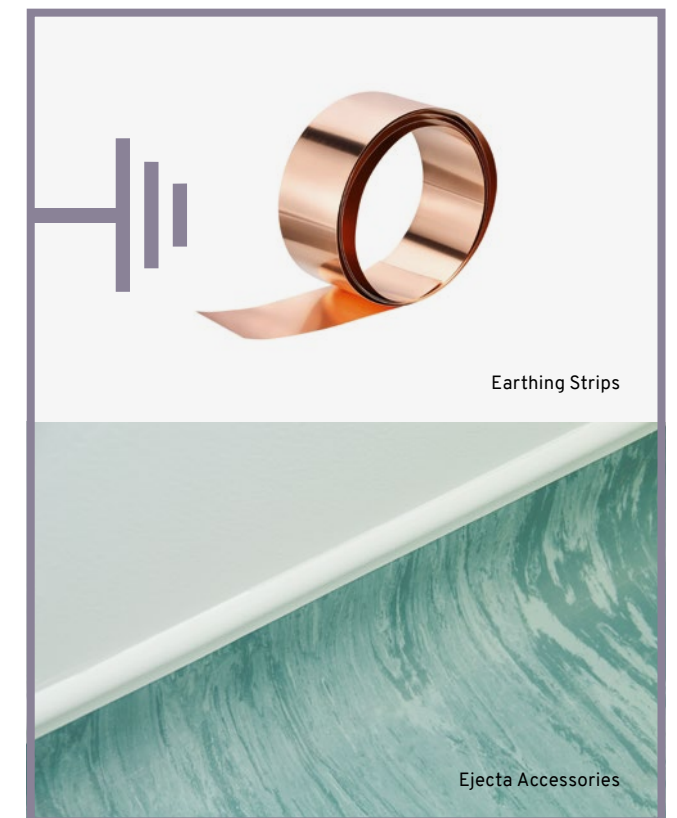
Earthing Strips

Polyflor recommends the use of 50mm wide and 0.1mm thick brass, copper or stainless-steel tape for the earth system. For convenience Polyflor offers the option to purchase brass strips with our SD and EC flooring.

Ejecta Accessories

The Ejecta range of flooring accessories are PVC profiles which are ideal for use with the Polyflor range of products. They include coved skirtings that are fitted before the flooring is laid and can be welded to provide a secure joint (set-in) or after, to provide a neat finish (sit-on). Sheet flooring may be taken up the wall having created a radius using a cove former and capping strip ensures a continuous sealed surface.

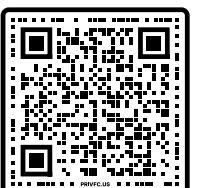
The benefits of a sealed, easily maintained surface are invaluable in hospitals and other similar locations where hygiene is of paramount importance.



For the latest technical information relating to correct installation please speak to our helpful Customer Technical Services Department team on +1 905 364 3000, or email sales@polyflor.ca.

Visit our dedicated Technical page, online at www.polyflor.ca/technical-and-maintenance-overview for access to our technical manual, installation and adhesives information.

Scan to find out more



Maintenance & Hygiene

The ESD family of vinyl floor coverings are designed to remove static charge away at a rate that prevents damage to processes, equipment and people. In order to ensure the ESD features work effectively, it is important that the correct maintenance procedure is adopted.

Maintenance guidelines

- ✓ When polish is applied, use conductive polish only. Refer to our Floorcare document, Technical Information Manual or speak to our CTSD team.
- ✓ Use approved ESD cleaning products.
- ✓ Routine cleaning: Sweep, mop, dry vacuum, buff with ESD pads.
- ✓ Humidity control: SD floors require $\geq 40\%$ RH.

See our ESD floorcare sheet for more information.

Glossary of ESD Standards & Test Methods

EN 1815 – measured in kV (kilovolt)

This test assesses Static Electrical propensity – ‘Antistatic’ flooring. The test method is ‘Stroll Test’ and compliant products do not generate static charges above 2kV. This relates to Polyflor vinyl floor coverings that do not have the capability to dissipate or conduct any charge, as with the ESD ranges.

EN 1081 – ($R_1 - R_2$) measured in Ω (Ohms)

This standard determines the electrical resistance of a floor covering through a test sample. The resistance is measured between a Tripod Electrode on the surface and a metal plate electrode placed beneath the test sample. This test measures how quickly a Polyflor ESD floor covering discharges electrostatic charge from its surface to its base. Results are calculated using an arithmetic mean.

IEC 61340-5-1

The overarching and probably most important standard in terms of the overall management of ESD controlled areas. This essential standard lists the various testing methods covering from footwear (IEC 61340-4-3) to packaging. Polyflor ESD floor coverings are covered in this standard under Section IEC 61340-4-1. The documents specific to both footwear and floor coverings (IEC 61340-4-5) outlines the various resistance test methods that should be employed to meet the requirements of the overarching standard IEC 61340-5-1.

IEC 61340-4-1 (RTG) Resistance to ground, measured in Ω

This test method can determine the electrical resistance of floor coverings. This test measures how quickly a floor covering discharges electrostatic charge to the ground. As

this test covers installed floors it can involve taking many measurements. The final value is therefore determined by calculating the geometric mean of the measurements taken.

IEC 61340-4-5 System resistance – measured in volts

This ‘2-test-method’ measures the electrostatic protection of footwear and flooring in combination with a person; and is used to evaluate the conductivity of the overall system (“person>footwear>flooring” - Human Body Method) against person-specific discharges.

IEC 61340-6-1

This standard provides essential test methods for evaluating electrostatic control for healthcare settings, general requirements for facilities. It is important for ensuring the safety and efficacy of electronic devices used in medical environments.

BS EN 2050 – measured in Ω

This ROF standard outlines the resistance levels needed when using conducting and antistatic products made from flexible polymeric material.

JSP 482 – measured in Ω

This ROF standard is for Ministry of Defence (MOD) UK specification that determines the level of resistance to earth permissible for installed floor covering in areas manufacturing or storing explosive or highly sensitive military grade electronic material.

GOOD TO KNOW!



Excellent resistance to chemicals such as detergents, acids and alkaline products.



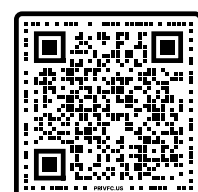
Non-absorbent, impervious and non-porous. Excellent resistance to dirt and bacteria.



Can be hot welded and installed with a coved skirting for easy cleaning.

ESD ranges are fully hygienic

Scan to find out more



For the latest technical advice and information relating to Maintenance or Polyflor’s ESD ranges in general, please speak to our helpful Customer Technical Services Department team on +1 905 364 3000, or email sales@polyflor.ca.

Visit our dedicated Technical page, online at www.polyflor.ca/technical-and-maintenance-overview/#maintenance for access to our maintenance and floorcare information.

Working closely with our CTSD department, **Palettone SD** was selected to provide the most suitable flooring within these specific healthcare environments.

"A smooth installation and visually impressive finish. Polyflor never disappoints."

Mark Tulett,
Kendal Office Contracts

Case Study

Project: Community Diagnostic Centre,
Mile End Hospital
Location: Central London
Product: Palettone SD, Dove Tail (8607SD)

When this NHS healthcare facility in Central London expanded its indispensable service, Polyflor added its visually appealing ESD product across the expansive floor space. The outcome was an uplifting décor that welcomed visitors and provided reassurance to staff working within specialist treatment rooms.

The hospital delivers a range of specialist and general outpatient services designed to support the local community.

Under the management of Barts Health NHS Trust, it was decided to enhance the Mile End Hospital facilities by renovating an existing on-site space to create a Community Diagnostic Centre (CDC).

London-based Ansell + Bailey, a well-established practice specialising in the healthcare sector, oversaw design responsibilities. Denise Cloutt, Associate/Project Architect, led the project Design Team, relishing the opportunity to create a space that would noticeably enhance patient experience.

The Design Team worked alongside the Trust, discussing options that met the needs of staff, patients, and visitors. When specifying the CDC flooring, both parties centred on functionality to meet the exacting needs of a healthcare environment whilst withstanding strict cleaning regimes.

Ansell + Bailey was already familiar with Polyflor, whose Customer Technical Services Department (CTSD) had previously advised the practice on the most suitable flooring within specific healthcare environments.

Reflecting on the project, Denise confirmed she was impressed with Palettone SD, which offered Static Dissipative flooring in complementary Palettone PUR shades, eliminating compromise on aesthetics and functionality in specialist rooms.

"The flooring was an integral part of the interior's design strategy, helping to create a sense of identity for each diagnostic function and working in harmony with the bespoke artwork developed for the project."

Denise Cloutt, Associate/Project Architect, Ansell + Bailey

Main contractor, Storm Building, employed Kendal Office Contracts to complete all flooring work under the management of Mark Tulett, who commented: **"A smooth installation and visually impressive finish. Polyflor never disappoints."**



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