

MIPOLAM EL

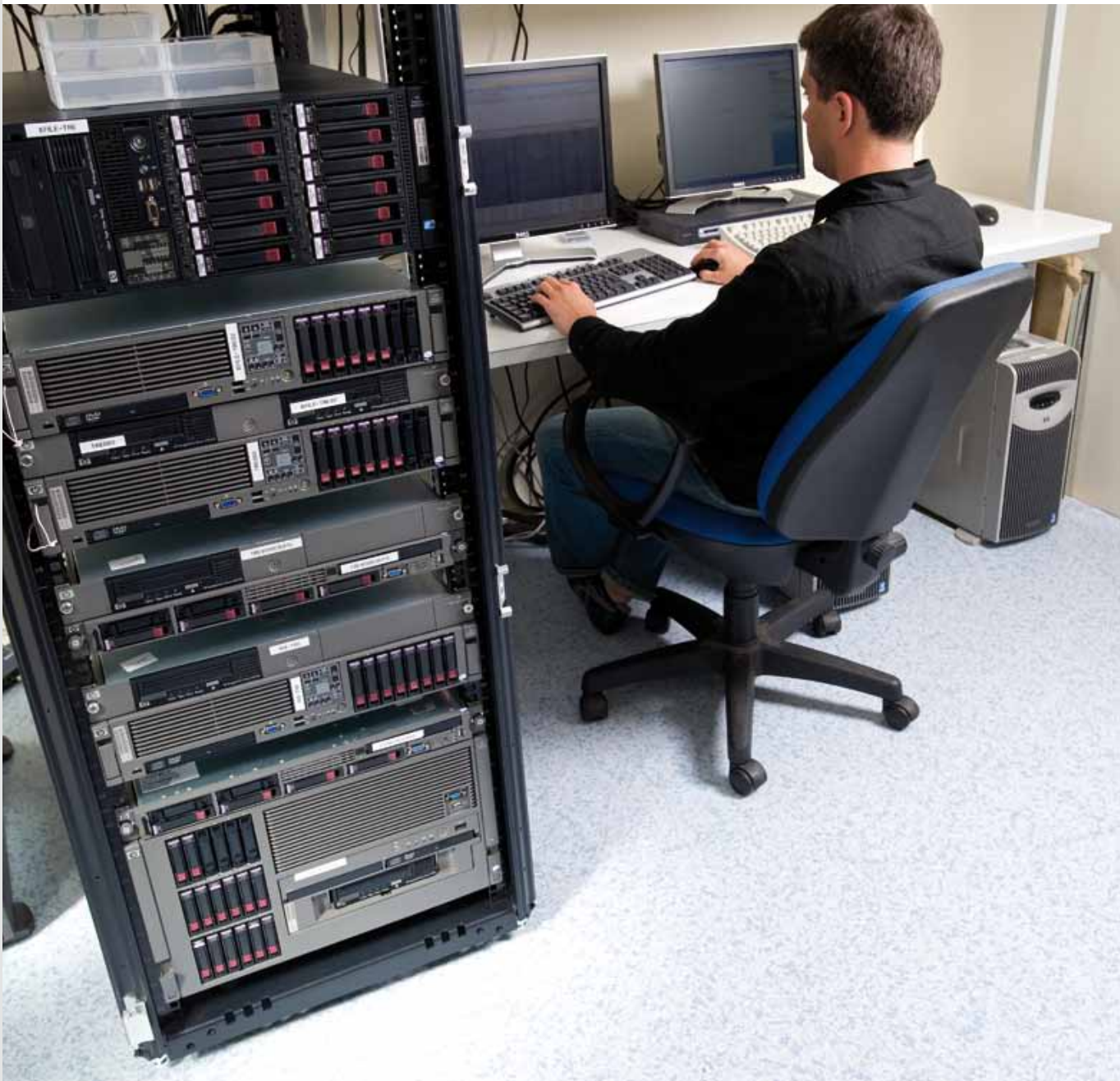
gerflor.com



Gerflor[®]
theflooringgroup

MIPOLAM EL

- ▶ Electronic and high-tech industry
- ▶ Cleanrooms
- ▶ Healthcare: Intensive care and surgical suites





Static electricity

Static electricity is everywhere. At its most spectacular, we see thunderbolts and lightning but it is also generated by friction and by the separation of two differing materials where one is not a conductor. This produces a build-up of electric charge on the surface of each of the materials with one becoming positively and, the other negatively charged.

The electrostatic charges naturally seek to balance themselves out. Electro Static Discharge (ESD) occurs as soon as contact is made with a conductive element.

Static electricity is harmless to humans however, it can pose a serious threat to sensitive equipment. Vulnerable electronic equipment can be subject to a reduction in sensitivity and even complete failure in the event of an uncontrolled build up and discharge of electrostatic energy.

Typical areas for concern include healthcare environments such as operating theatres and intensive care wards, the electronics industry and industrial clean rooms.



ESD risks

In technical areas and industrial premises, electrostatic discharges lead to a number of problems, the most frequent among them being:

- **degradation of sensitive electronic components** leading to a loss of performance which is sometimes impossible to detect during routine quality control
- **deterioration of production conditions:** the disruption of sensitive electronic equipment, build-up of dust, reduction in line output, etc.
- **risk to human safety**

In the electronic industry, it is believed that 30-50% of faults found in components is due to uncontrolled Electro Static Discharge (ESD).

In particular circumstances, the close packing of components can have a marked increase in the sensitivity of products and a charge of as little as 10 volts may be sufficient to increase risk.

This is most notable in restricted industrial areas where ESD can cause explosions. This may be due to the presence of flammable or explosive mixtures but also in areas where fine powders are subject to friction such as the bakery industry where fire is a permanent threat.

Controlling ESD

To reduce the risk from static electricity, various solutions can be effective including: earthing points for people and equipment, static control packaging, ionisation, etc., all having the intention of:

- **Limiting charges**
- **Controlling discharges.**

An overall ESD risk assessment must be carried out in order to take into account the professional environment

and the risks linked to procedures, the sensitivity and the susceptibility of the components.

The main method of limiting electrostatic charge is by grounding people and objects. The use of electro-conductive floorings combined with conductive footwear constitutes a key part in managing this phenomenon and guarantees a long-term, low level and harmless discharge to people.

Mipolam EL floorings

Mipolam EL floorings offer a complete range of products, **conductive (EL5)** and **dissipative (EL7)**, which, according to the type of requirements, ensure:

- the protection of electronic equipment and components
- the protection of people against electro-static discharge risks
- the protection of premises against explosive risks.

Used in conjunction with conductive footwear, Mipolam EL floorings guarantee the highest level of protection against ESD risk due to their **low generation of charges** (from < 100 to < 20 V according to the IEC 61340 - 4 - 5) and to the effective **elimination of charges over the long term.**



MIPOLAM EL

MIPOLAM ACCORD EL7 - ROBUST EL7

MIPOLAM ACCORD EL7



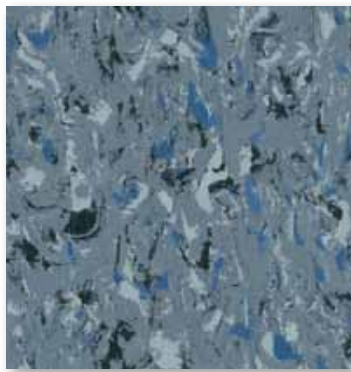
3113 Manitoba



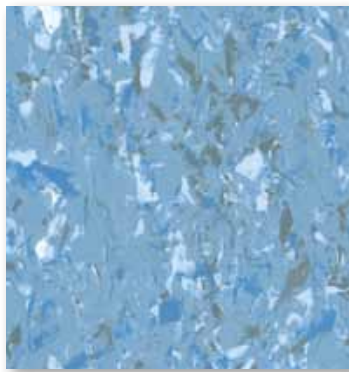
3111 Huron



3127 Garda



3159 Michigan



3116 Mälaren



3160 Balaton

MIPOLAM ROBUST EL7



0003 Ivory



0002 Platinum



0112 Storm





0306 Green



0005 Steel

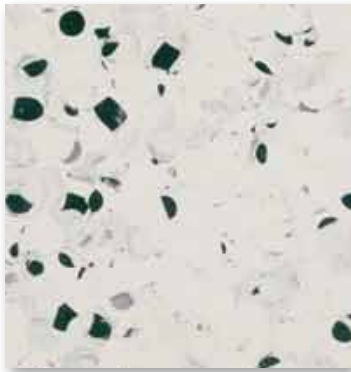


0013 Pewter

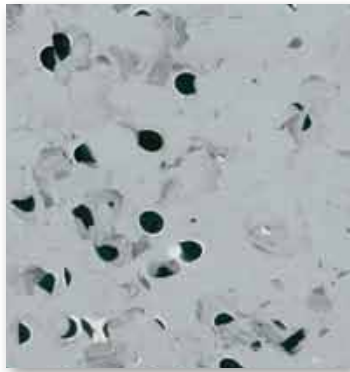
 Compact sheet without foam backing -  Compact tile without foam backing

MIPOLAM ELEGANCE EL5 - TECHNIC EL5

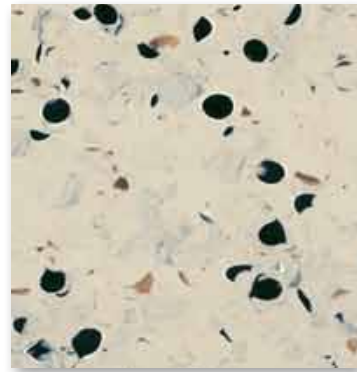
MIPOLAM ELEGANCE EL5



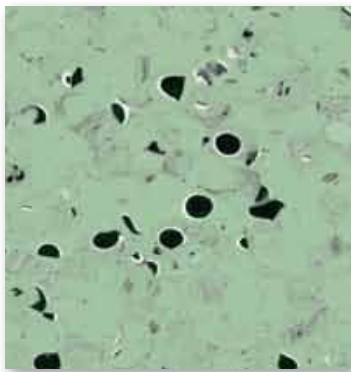
0350 Light Grey



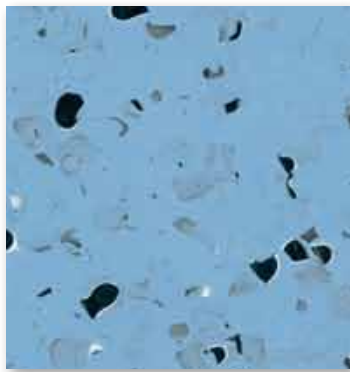
0352 Grey



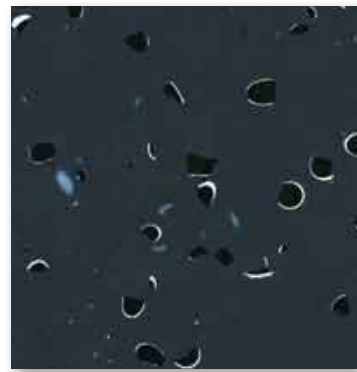
0353 Beige



0355 Green



0354 Blue



0351 Black

MIPOLAM TECHNIC EL5



0635 White



0636 Grey



0640 Beige



0637 Light Blue



0638 Blue



0639 Green

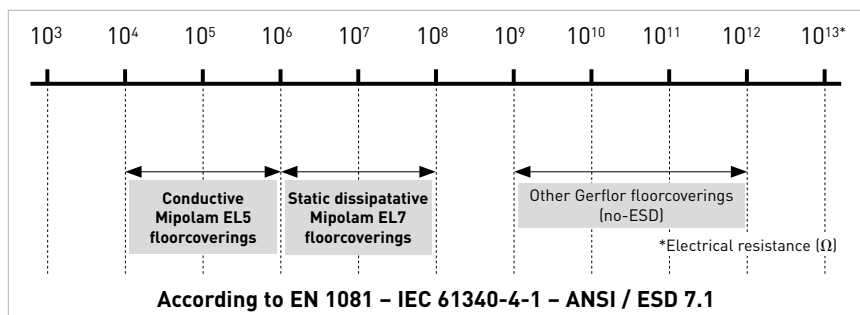
The images of floorcoverings in this catalogue have been reproduced as faithfully as printing technology permits.



SAMPLING SERVICE: Call Gerflor to request your samples!

PRODUCT BENEFITS

The range that covers all static control requirements



Controlling discharges

- Mipolam EL floorcoverings guarantee the lasting elimination of electrostatic charges, while taking into account the safety of people.

Low accumulation of charges

- Mipolam EL floorcoverings guarantee a low accumulation of electrostatic charges to people and equipment.

Mechanical resistance

- The homogeneous and compacted surface provides an enduring resistance to static and dynamic loads.

Chemical resistance

- Mipolam EL floorcoverings display excellent resistance to chemical products such as detergents, acids and alkaline products.

Minimum gas emission

- Low VOC emissions (<100 µg/m³).

Decontamination

- Mipolam EL floorcoverings are rated as “good” in compliance with ISO 8690 the nuclear decontamination standard.

Fully hygienic

- Floorcovering is non-absorbent, impervious and non-porous.
- Can be hot welded and installed with a coved skirting for easy cleaning.

Access flooring with laminar flow



- Mipolam EL tiles are especially well suited to “high-tech” applications and are designed to be compatible with access flooring in cleanrooms with laminar flow.

Low risk of particulate contamination

- The Mipolam EL tiles meet the high requirements of particulate contamination set by electronic industry due to the low release of carbon particles.

PRODUCT DESCRIPTION

MIPOLAM ELEGANCE EL5

 2 m	$10^4 \leq Rt \leq 10^6 \Omega$	 100 % recyclable
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MIPOLAM ELEGANCE EL5 is a conductive flexible homogeneous vinyl floorcovering available in sheet form.

The 2 mm homogeneous material incorporates carbon encapsulated granules throughout its full thickness and has a conductive backing to ensure optimal and constant conductive properties throughout its full life expectancy. It has permanent antistatic properties (< 20 V).

It acts as a continuous conductive $10^4 \leq Rt \leq 10^6$ (EN 1081) and complies with EN 649.

MIPOLAM TECHNIC EL5

 608 x 608 mm	$10^4 \leq Rt \leq 10^6 \Omega$	 100 % recyclable
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MIPOLAM TECHNIC EL5 is a conductive flexible homogeneous compacted available in tiles.

The conductive carbon coated PVC pellets create a perfect conductive network for permanent conductive properties and antistatic properties (< 20 V) throughout its full life expectancy.

It acts as a continuous conductive $10^4 \leq Rt \leq 10^6$ (EN 1081) and complies with EN 649.

MIPOLAM ACCORD EL7




 2 m	 608 x 608 mm	$10^6 \leq Rt \leq 10^8 \Omega$	 100 % recyclable
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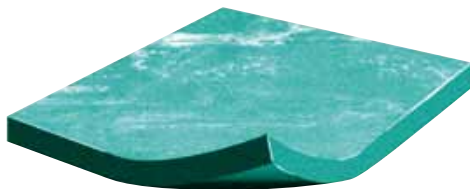


MIPOLAM ACCORD EL7 is a dissipative flexible homogeneous vinyl floorcovering available in both sheet and tile form. Calendered and compacted. It has permanent antistatic properties (< 100 V).

It acts as a continuous dissipater $10^6 \leq Rt \leq 10^8$ (EN 1081) and complies with EN 649.



MIPOLAM ROBUST EL7

 2 m	 608 x 608 mm	$10^6 \leq Rt \leq 10^8 \Omega$	 100 % recyclable
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MIPOLAM ROBUST EL7 is a dissipative flexible homogeneous vinyl floorcovering available in both sheet and tile form. Calendered and compacted. It has permanent antistatic properties (< 100 V).

It acts as a continuous dissipater $10^6 \leq Rt \leq 10^8$ (EN 1081) and complies with EN 649.

 Compact sheet without foam backing -  Compact tile without foam backing



SAMPLING SERVICE: Call Gerflor to request your samples!

TECHNICAL DATA

DESCRIPTION / BESCHREIBUNG / DESCRIPTION / BESCHRIJVING / DESCRIPCIÓN / DESCRIÇÃO / DESCRIZIONE

Total thickness / <i>Gesamtdicke</i> / Epaisseur totale / <i>Totale dikte</i> / Espesor total / <i>Espessura total</i> / Spessore totale	EN 428 ASTM F386-02	mm inch
Weight / <i>Flächengewicht</i> / Poids / <i>Gewicht</i> / Peso / <i>Peso</i> / Peso	EN 430	g/sq.m
Width/length of sheet / <i>Bahnenbreite/-länge</i> / Largeur/longueur des lés / <i>Rolbreedte/Rollegte</i> / Ancho/largo de rollos / <i>Largura/comprimento dos rolos</i> / Larghezza/lunghezza dei teti	EN 426	cm / lm feet - inch
Coverage / roll	-	sq.ft sq.m
Tile size / <i>Format Fliesen</i> / Format dalles / <i>Formaat der tegels</i> / Dimensiones de las losetas / <i>Dimensões dos mosaicos</i> / Dimensione delle piastre	EN 427	mm inch
Number of tiles per package / Nombre de dalles par boîte / Aantal tegels per doos / Cantidad de losetas/caja / Quantidade dos mosaicos/caixa / N° piastre per confezione	-	-

CLASSIFICATION / KLASSIFIZIERUNG / CLASSIFICATION / CLASSIFICATIE / CLASIFICACIONES / CLASSIFICAÇÕES / CLASSIFICAZIONI

Norm/product specification / <i>Produkt Norm</i> / Norme produit / <i>Technische eigenschappen</i> / Normas / <i>Normas</i> / Norma prodotto	- ASTM F 1913-04	- -
European classification / <i>Europäische Klassifizierung</i> / Classement européen / <i>Europese classificatie</i> / Europea / <i>Europeia</i> / Europea	EN 685	class
Fire rating / <i>Brandverhalten</i> / Classement feu / <i>Brand classificatie</i> / Fuego / <i>Fogo</i> / Reazione al fuoco	EN 13501-1 ASTM E 648 CAN/ULC S102.2	class class -
Electrical resistance / <i>Elektrischer Widerstand</i> / Résistance électrique / <i>Elektrische eigenschappen</i> / Comportamiento electrostático / <i>Comportamento electrostático</i> / Resistenza elettrica ⁽¹⁾	EN 1081 IEC 61340-4-1 ANSI / ESD-S7.1	Ohm Ohm Ohm
Static electrical propensity / <i>Begehaufladung</i> / Potentiel de charge / <i>Elektrische eigenschappen</i> / Comportamiento electrostático / <i>Comportamento electrostático</i> / Resistenza elettrica	EN 1815 IEC 61340-4-5	kV V
Slip resistance wet / <i>Rutschhemmung</i> / Glissance humide / <i>Anti-slip</i> / Deslizamiento humedo / <i>Escorregamento humido</i> / Scivolosità umida	DIN 51 130/BGR 181	class

PERFORMANCE / TECHNISCHE EIGENSCHAFTEN / PERFORMANCES / TESTRESULTAAT / CUALIDADES TÉCNICAS / PERFORMANCES /

Wear resistance / <i>Verschleißverhalten</i> / Résistance à l'usure / <i>Slijtvastheid</i> / Abrasión / <i>Abrasão</i> / Resistenza all'abrasione	EN 660.2	mm ³
Wear group / <i>Verschleißgruppe</i> / Groupe d'abrasion / <i>Groep slijtvastheid</i> / Grupo de abrasión / <i>Grupo de abrasão</i> / Gruppo di abrasione	EN 649	-
Type binder content / <i>Bindenmittelgehalt</i> / Teneur en agent liant	ISO 10581	Type
Dimensional stability / <i>Maßstabilität</i> / Stabilité dimensionnelle / <i>Maatvastheid</i> / Estabilidad dimensional / <i>Estabilidade dimensional</i> / Stabilità dimensionale	EN 434	%
Residual indentation / <i>Resteindruck</i> / Poinçonnement statique rémanent / <i>Indrukbelasting</i> / Punzonamiento / <i>Punçoamento</i> / Impronta	EN 433	mm
Castor chair test / <i>Stuhlrollenbeanspruchung</i> / Essai de la chaise à roulettes / <i>Rolweerstand bureaustoeien</i> / Determinación del efecto de una silla con ruedas / <i>Resistência a cadeiras de rodas</i> / Resistenza al passaggio di sedie con rotelle (Type W / Typ W)	EN 425	-
Thermal conductivity / <i>Wärmeleitfähigkeit</i> / Conductivité thermique / <i>Thermische weerstand</i> / Resistencia térmica / <i>Resistência térmica</i> / Resistenza termica	EN 12 524	W/(m.K)
Colour fastness / <i>Lichtechtheit</i> / Solidité lumière / <i>Lichtechtheid</i> / Resistencia a la luz / <i>Estabilidade das cores</i> / Solidità alla luce	EN 20 105 - B02	degree
Chemical resistance / <i>Verhalten gegenüber Chemikalien</i> / Résistance aux produits chimiques / <i>Chemische bestendigheid</i> / Resistencia a los productos químicos / <i>Resistência aos produtos químicos</i> / Resistenza ai prodotti chimici ⁽³⁾	EN 423	-

ENVIRONMENT / INDOOR AIR QUALITY

TVOC after 28 days / <i>TVOC (28 Tage)</i> / TVOC (28 jours) / <i>TVOC (28 dagen)</i> / TVOC (28 dias) / <i>TVOC (28 dias)</i> / TVOC (28 giorni)	ISO 16000-6	µg/m ³
Certification		





CE MARKING / CE KENNZEICHNUNG / MARQUAGE CE / EG-CONFORMITEITSMERK / MARCA DE CONFORMIDAD CE / MARCA DE

	EN 14041	- -
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(1) Measured before installation. (2) Measured with ABEBA conductive shoes. (3) Staining table available upon request.


INSTALLATION

Laying is the responsibility of the installer. Installation should be made in accordance with installation guidelines supplied and regularly updated by Gerflor's Technical Department. Installation should be carried out in accordance with local standards. Subfloor to be smooth, hard, clean and dry prior to laying. Where applicable the subfloor must incorporate an effective Damp Proof Membrane. The material must be allowed to acclimatise 24 hours prior to installation in a room temperature of between 18-24°C. All seams must be heat welded using Gerflor matching weld rod.

MIPOLAM ELEGANCE EL5	MIPOLAM TECHNIC EL5	MIPOLAM ACCORD EL7	MIPOLAM ROBUST EL7
2.00	2.00	2.00	2.00
0.08	0.08	0.08	0.08
3060	3440	3100	3300
200 / 20	-	200 / 20	200 / 20
6'6" / 66"	-	6'6" / 66"	6'6" / 66"
430.56	-	430.56	430.56
40	-	40	40
-	608 x 608	608 x 608	608 x 608
-	23.937" x 23.937"	23.937" x 23.937"	23.937" x 23.937"
-	20	20	20
EN 649	EN 649	EN 649	EN 649
compliant	compliant	compliant	compliant
34-43	34-43	34-43	34-43
Bfl - s1	Bfl - s1	Bfl - s1	Bfl - s1
Class 1	Class 1	Class 1	Class 1
-	-	-	-
$10^4 \leq Rt \leq 10^6$	$10^4 \leq Rt \leq 10^6$	$10^6 \leq Rt \leq 10^8$	$10^6 \leq Rt \leq 10^8$
$Rt \leq 10^6$	$10^4 \leq Rt \leq 10^6$	$10^6 \leq Rt \leq 10^9$	$10^6 \leq Rt \leq 10^9$
$2.5 \times 10^4 \leq Rt \leq 10^6$	$10^4 \leq Rt \leq 10^6$	$10^6 \leq Rt \leq 10^8$	$10^6 \leq Rt \leq 10^8$
< 2	< 2	< 2	< 2
< 20 ^[2]	< 20 ^[2]	< 100	< 100
R9	R9	R9	R9
CARATTERISTICHE TECNICHE			
≤ 4.0	≤ 4.0	≤ 4.0	≤ 7.5
P	P	P	M
II	II	II	II
≤ 0.40	≈ w0.05	Sheet ≤ 0.40 Tile ≤ 0.25	Sheet ≤ 0.40 Tile ≤ 0.25
≈ 0.03	≈ 0.03	≈ 0.03	≈ 0.03
OK	OK	OK	OK
0.25	0.25	0.25	0.25
≥ 6	≥ 6	≥ 6	≥ 6
OK <i>beständig gegenüber Haushaltschemikalien und nicht färbenden, verdünnten Säuren und Laugen bei kurzzeitiger Einwirkung</i>			
< 10	< 10	< 10	< 10
Floorscore™	-	Floorscore™	Floorscore™
CONFORMIDADE CE / MARCATURA CE DI CONFORMITA			
			

MAINTENANCE

No emulsion is required. Maintenance should be carried out regularly to retain the appearance and durability of the floor. The floorcovering should be maintained with regular sweeping and damp mopping using a neutral cleanser, more intense cleaning should be carried out using a fine spray cleaning pad under a floor machine, or for larger areas combined machine cleaning.

 Rubber leaves indelible stains on vinyl floorings: do not use mats with rubber backing and replace tubular furniture feet with those made of PVC or polyamide.






Further installation and maintenance instructions are available from Gerflor.



SAMPLING SERVICE: Call Gerflor to request your samples!

COMMITTED TO SUSTAINABLE DEVELOPMENT

ECO-RESPONSIBLE SOLUTIONS

 <p>Health & safety</p>	Selected and responsible raw materials	<p>NO heavy metal, NO solvent. NO formaldehyde, NO substance potentially subject to REACH* restrictions.</p>
	Low VOC emissions	<ul style="list-style-type: none"> - Comply with AgBB protocol - Floorscore certified - Volatile Organic Compound (VOC) emissions of <10 µg/m³ after 28 days for homogeneous products and <100 µg/m³ for heterogeneous products, using European procedures - No formaldehyde and carcinogenic emissions 
 <p>Recycling</p>	100% recyclable materials	<p>Gerflor will help recycle its products at the end of their life cycle</p>
	Uses recycled materials	<ul style="list-style-type: none"> - On average, Gerflor floors are made of 25% recycled content - 100% of recycled materials are inspected and exempt from REACH* restrictions.
 <p>ISO 14001</p>	ISO 14001 certified	<ul style="list-style-type: none"> - Gerflor industrial sites hold ISO 14001 accreditation. - EPD available on www.gerflor.com
 <p>Life-cycle analysis</p>	Long life at low cost	<p>Opting for high quality «no polish for life» flooring such as one of our patented ProtecSol®, Sparclean®, Evercare™ treated products, you can drastically reduce the usage of chemical product and water and ensure the best financial outcome but also the security of knowing the designs and colours will stand the test of time even in high traffic areas.</p>

*REACH is the new European regulation on registering, assessing and authorising chemical products within the European Union. Please do not hesitate to ask us for a full assessment of your project.

CONTRIBUTION TO GREEN BUILDING CERTIFICATION

BREEAM (Building Research Establishment Environmental Assessment Method) is the oldest British Standard and one of the most used worldwide.

It's a standard reference in term of sustainable construction (with LEED and HQE).

It can easily be adapted to local regulations. Our floorings contribute to building certifications:

- LCA (Life Cycle Analysis), including the choice of safe raw materials
- VOC emissions: low formaldehyde level, our floorings comply with the Appendix ZA4 of the European Standard EN 14041:2004

Gerflor contribution

- Low emitting materials: Floorscore certified products
- Products containing pre-consumer recycled materials
- 2 LEED™ specialists part of Gerflor staff



Reference:



KAUST University - Kingdom of Saudi Arabia
Photo credits: Oger international / KAUST University

LEED (Leadership in Energy and Environmental Design) issued by the USGBC (US Green Building Council), confirms that a building or a community has been designed and constructed using strategies to improve performance by saving energy, treating water, reducing CO₂ emissions, and improving indoor air quality. Our floorings contribute to building certifications (3 levels of certification: silver, gold, platinum):

- VOC emission (FloorScore compliant)
- recycled content.

Recycling



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gerflor.com

**ARCHITECTURE
DECORATION
SPORT
TECHNOSPECIFIC**

Illustrations : J.P.E. - Photos : Iconos - Réalisation : coco & co - Mipolam EL GB - 03/2014

Gerflor Don't forget our complementary ranges!



Handrails



Wall Coverings
& Protections



Entrance mats



Skirtings & Profiles

and Be CONNECTED!



www.gerflor.com



Committed to sustainable development

Gerflor
theflooringgroup