

MIPOLAM EL

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Gerflor[®]
theflooringgroup

MIPOLAM EL

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



A complete range of products for all sites sensitive to the risk of electrostatic discharge

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 health-care 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.

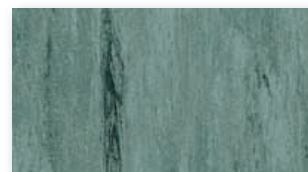
Used in conjunction with conductive footwear, Mipolam EL floorings guarantee the highest level of protection against ESD risk due to their **low generation of charges** (from < 100 to < 20 V according to the IEC 61340 - 4 - 5) and to the effective **elimination of charges over the long term.**



MIPOLAM EL

MIPOLAM ROBUST EL7 - ACCORD EL7

▶ MIPOLAM ROBUST EL7



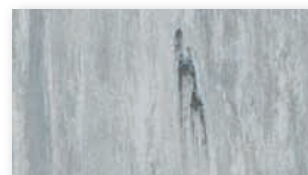
0306 Green
WR: 0585 0572



0103 White
WR: 0585 0650



0003 Ivory
WR: 0585 0818



0002 Platinum
WR: 0585 0201



0005 Steel
WR: 0585 0514



0006 Honey
WR: 0585 0318



0112 Storm
WR: 0585 0680



0013 Pewter
WR: 0585 0413



0004 Clay
WR: 0585 0679



0102 Black
WR: 0585 0675

▶ MIPOLAM ACCORD EL7



3117 Ladoga
WR: 0585 0087



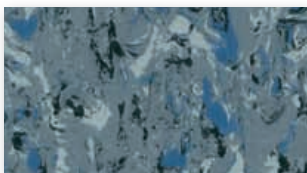
3113 Manitoba
WR: 0585 0498



3101 Louise
WR: 0585 0528



3116 Mälaren
WR: 0585 0500



3159 Michigan
WR: 0585 0495



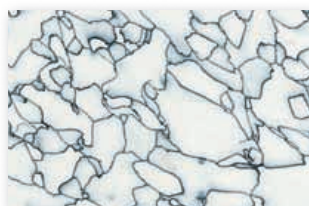
3111 Huron
WR: 0585 0093

 Compact sheet without foam backing -  Compact tile without foam backing - **WR:** Welding Rods

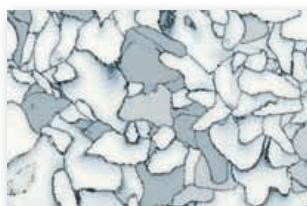
MIPOLAM TECHNIC EL5 - ELEGANCE EL5



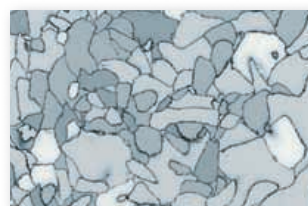
MIPOLAM TECHNIC EL5



0200 Blanc
WR: 0585 0789



0701 Ariane
WR: 0585 0314



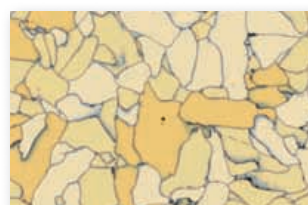
0723 Narro
WR: 0585 0304



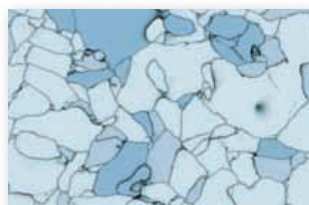
0785 Levanto
WR: 0585 0318



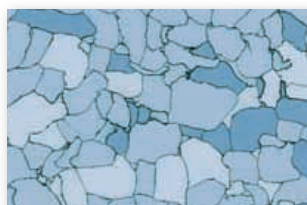
0783 Pluto
WR: 0585 2329



0784 Sirocco
WR: 0585 0641



0786 Aquilo
WR: 0585 0216



0779 Jeano
WR: 0585 0631



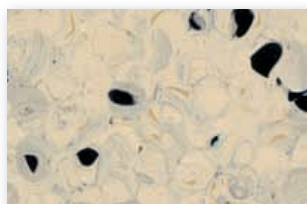
0780 Michaelo
WR: 0585 0634



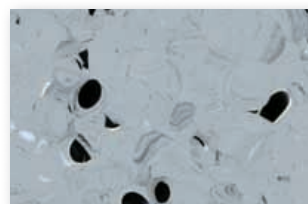
MIPOLAM ELEGANCE EL5



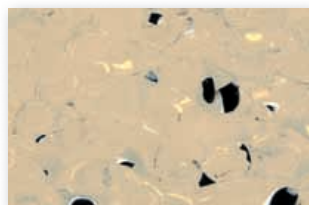
0131 Rigel
WR: 0585 2330



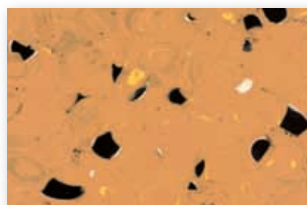
0136 Vega
WR: 0585 0501



0133 Arcturus
WR: 0585 2331



0138 Procyon
WR: 0585 0318



0152 Deneb
WR: 0585 0535

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

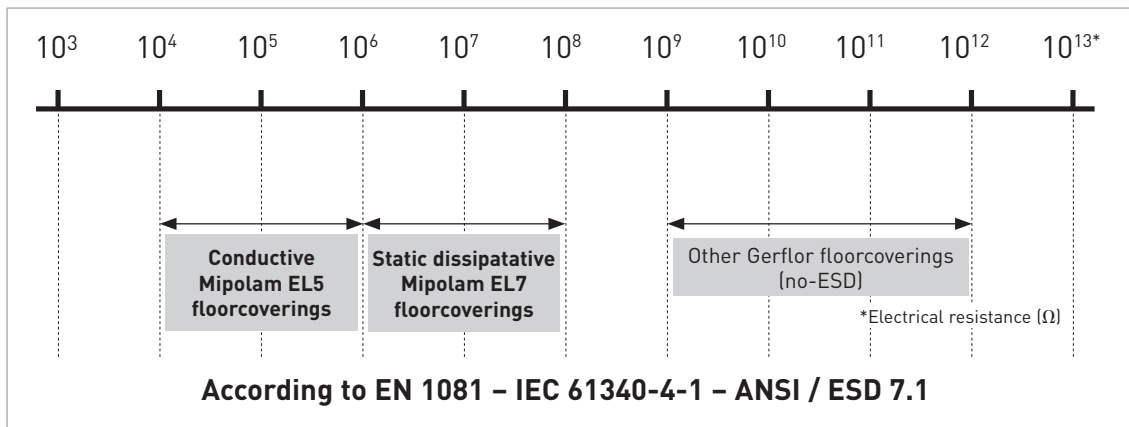


SAMPLING SERVICE: Call Gerflor to request your samples!

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.

Decontamination

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

Fully hygienic

- Fungistatic and bacteriostatic treatment throughout total thickness of flooring.
- 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.

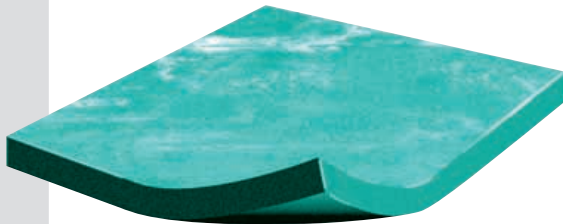


PRODUCT DESCRIPTION

MIPOLAM ROBUST EL7, MIPOLAM ACCORD EL7, MIPOLAM

▶ MIPOLAM ROBUST EL7




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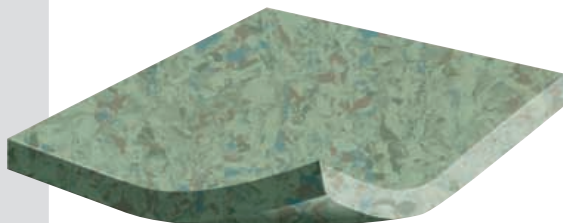


MIPOLAM ROBUST EL7 is a dissipative flexible homogeneous vinyl floorcovering available in both sheet and tile form. Calendered and compacted it has permanent, antistatic properties ($< 100 \text{ V}$).

It acts as a continuous dissipater $10^6 < R_t < 10^8$ (EN 1081) and comply with EN 649.

▶ MIPOLAM ACCORD EL7



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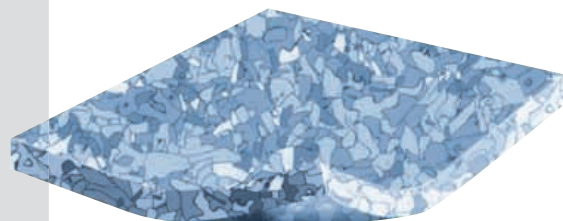


MIPOLAM ACCORD EL7 is a dissipative flexible homogeneous vinyl floorcovering available in both sheet and tile form. Calendered and compacted it has permanent, antistatic properties ($< 100 \text{ V}$).

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

▶ MIPOLAM TECHNIC EL5

 608 x 608 mm	$5 \times 10^4 \leq R_t \leq 10^6 \Omega$	 100 % recyclable
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MIPOLAM TECHNIC EL5 is a static-conductive, flexible, homogeneous vinyl floorcovering with an electrical resistance of $5 \times 10^4 \leq R_t \leq 10^6$ (EN 1081) available in tiles. The conductive carbon coated PVC pellets create the permanent static-conductive properties.

It complies with EN 649.

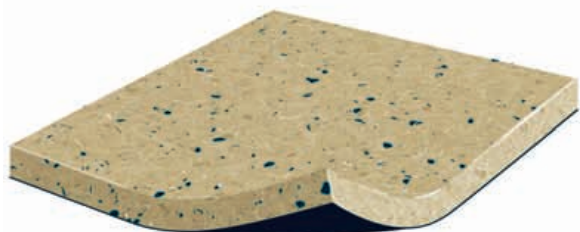
TECHNIC EL5 & MIPOLAM ELEGANCE EL5

▶ MIPOLAM ELEGANCE EL5



$10^4 \leq Rt \leq 10^6 \Omega$

100 % recyclable















MIPOLAM ELEGANCE EL5 is a conductive, vinyl floorcovering in accordance with EN 1081 ($10^4 \leq Rt \leq 10^6$) and is available in 2m roll widths.

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. The product has excellent resistance to static and rolling loads and is classified 34-43 in accordance to EN 649.



SAMPLING SERVICE: Call Gerflor to request your samples!

TECHNICAL DATA

			MIPOLAM ROBUST EL7	MIPOLAM ACCORD EL7	MIPOLAM TECHNIC EL5	MIPOLAM ELEGANCE EL5
DESCRIPTION						
Total thickness	EN 428	mm	2	2	2	2
Weight	EN 430	g/m ²	3300	3100	3440	3060
Width/Length of sheet	EN 426	cm/lm	200 / 20	200 / 20	-	200 / 20
Tile size	EN 427	mm	608 x 608	608 x 608	608 x 608	-
Number of tiles per package	-	-	20	20	20	-
CLASSIFICATION						
Norm / Product specification	-	-	EN 649	EN 649	EN 649	EN 649
European classification	EN 685	class	34-43	34-43	34-43	34-43
K rating	-	-	K5	K5	K5	K5
Fire rating	EN 13501-1	-	B _{f1} -s1	B _{f1} -s1	B _{f1} -s1	B _{f1} -s1
Electrical resistance	EN 1081 IEC 61340-4-1 ANSI / ESD 7.1	Ω	10 ⁶ ≤ Rt ≤ 10 ⁸ 10 ⁶ ≤ Rt ≤ 10 ⁹ 10 ⁶ ≤ Rt ≤ 10 ⁸	10 ⁶ ≤ Rt ≤ 10 ⁸ 10 ⁶ ≤ Rt ≤ 10 ⁹ 10 ⁶ ≤ Rt ≤ 10 ⁸	5x10 ⁴ ≤ Rt ≤ 10 ⁴ Rt ≤ 10 ⁸ 2.5x10 ⁴ ≤ Rt ≤ 10 ⁵	10 ⁴ ≤ Rt ≤ 10 ⁶ Rt ≤ 10 ⁸ 2.5x10 ⁴ ≤ Rt ≤ 10 ⁶
Static electrical propensity	EN 1815 IEC 61340-4-5	kV V	< 2 < 100	< 2 < 100	< 2 < 20*	< 2 < 20*
Slip resistance wet	DIN 51 130	class	R9	R9	R9	R9
PERFORMANCE						
Wear resistance	EN 660.2	mm ³	≤ 7.5	≤ 4.0	≤ 4.0	≤ 4.0
Wear group	EN 649	group	M	P	P	P
Dimensional stability	EN 434	%	Sheet ≤ 0.4 Tile ≤ 0.25	Sheet ≤ 0.4 Tile ≤ 0.25	Tile ≤ 0.25	Sheet ≤ 0.40
Residual indentation	EN 433	mm	≈ 0.03	≈ 0.03	≈ 0.03	≈ 0.03
Thermal conductivity	EN 12 524	W/(m.K)	0.25	0.25	0.25	0.25
Colour fastness	EN 20 105 - B02	-	≥ 6	≥ 6	≥ 6	≥ 6
Chemical resistance	EN 423	-	Good	Good	Good	Good
Anti-bacterial & fungicidal	-	-	OK	OK	OK	OK
CE MARKING						
CE	-	-				
	EN 14041	-				
	-	-				


* Measured with ABEBA conductive shoes.

INSTALLATION

Installation is the responsibility of the installer and should be carried out in accordance with the latest instructions published by Gerflor's Technical Department. The subfloor must be smooth, hard, clean and dry prior to fitting. Where applicable the subfloor must incorporate an effective Damp Proof Membrane. The material must be allowed to acclimatise 24 hours before installation in a room temperature of between 18-24°C. All seams must be heat welded using Gerflor weld rod.

MAINTENANCE

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, or machine scrubbing with an appropriate pad. Further maintenance instructions are available upon request.

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



COMMITTED TO SUSTAINABLE DEVELOPMENT

Gerflor recognizes the importance of being proactive and creating new ways to achieve sustainable development. This is why Gerflor is devoting substantial resources to environmental research.

Gerflor achievements can be summarized as follows:

HEALTH & SAFETY

Vinyl is a safe material largely used in the automotive, food packaging, healthcare and construction industries and for tools, medical disposables, which come into close and intimate contact with humans.

Gerflor uses the same grade of material to produce its floorcoverings.

- **No heavy metals, no solvent based inks, no phthalates and components rated as carcinogenic, no formaldehydes, no PCP.**
- No substance potentially subject to any REACH (Registration, Evaluation and Authorisation of Chemical) restrictions.
- **Low VOC emissions:** on average more than 70 % lower than European standards.
- **Fire resistance:** vinyl does not help fire spread and does not release toxic gases like chloride (Cl₂) and far less carbon monoxide (CO) than any other type of flooring.



Health & Safety



Committed for future generation



Recycling

RECYCLING

Vinyl is one of the only building materials that is **100% recyclable**. As a specialist vinyl flooring manufacturer, Gerflor has developed recycling programs for:

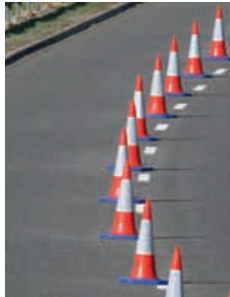
- **Post industrial waste recycling:** almost 100% of our manufacturing waste is recycled.
- **Post installation waste recycling:** In Europe Gerflor has started to organize the collection of post installation waste from large projects for recycling.
- **Post consumer waste recycling:** Gerflor vinyl floorings are fully recyclable at the end of their life and qualify for credits under many internationally accredited Green Building Schemes.



ISO 14001

ISO 14001

In Europe, less than 50% of manufacturers have achieved an ISO 14001 certification and Gerflor is one of them. Gerflor industrial sites are certified ISO 14001 and are committed to continuously improving their environmental performance in terms of: air protection, reduction of energy consumption.



Second life product:
It used to be a vinyl floor...



Life Cycle Analysis

LIFE CYCLE ANALYSIS

Life Cycle Analysis is regarded as the ultimate means by which all environmental impacts are measured and improved upon during a product's life cycle. This assessment includes manufacture, delivery, installation, cost of ownership and maintenance, ultimate disposal and recycling of all products.

All new Gerflor product ranges are developed using a full life cycle analysis model.

- In Europe, Gerflor is actively involved with the ERFMI (European Resilient Flooring Manufacturer Institute) in preparing EU wide Life Cycle Assessment of a broad range of flooring types and specifications. From this study, a series of Environmental Product Declarations have been produced.
- In France, Gerflor has been involved with the SFEC to meet the HQE requirements.
- In the UK, all Gerflor products which match the BRE generic flooring specifications have been given either A or A+ ratings, with A+ representing the lowest environmental impact possible.



Gerflor Tarare
manufacturing plant



FDES: Environmental Product
Declaration in France



green building council australia
MEMBER



DGNB
Deutsche Gesellschaft für Nachhaltiges Bauen e.V.



Dutch Green Building Council



ARBEITSGEMEINSCHAFT
PVC UND UMWELT E.V.



floor
score

gerflor.com

ARCHITECTURE
DECORATION
SPORT
TECHNOSPECIFIC

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Health
& Safety



ISO 14001



Recycling



LCA
Life Cycle
Analysis

Committed to sustainable development

Gerflor®
theflooringgroup