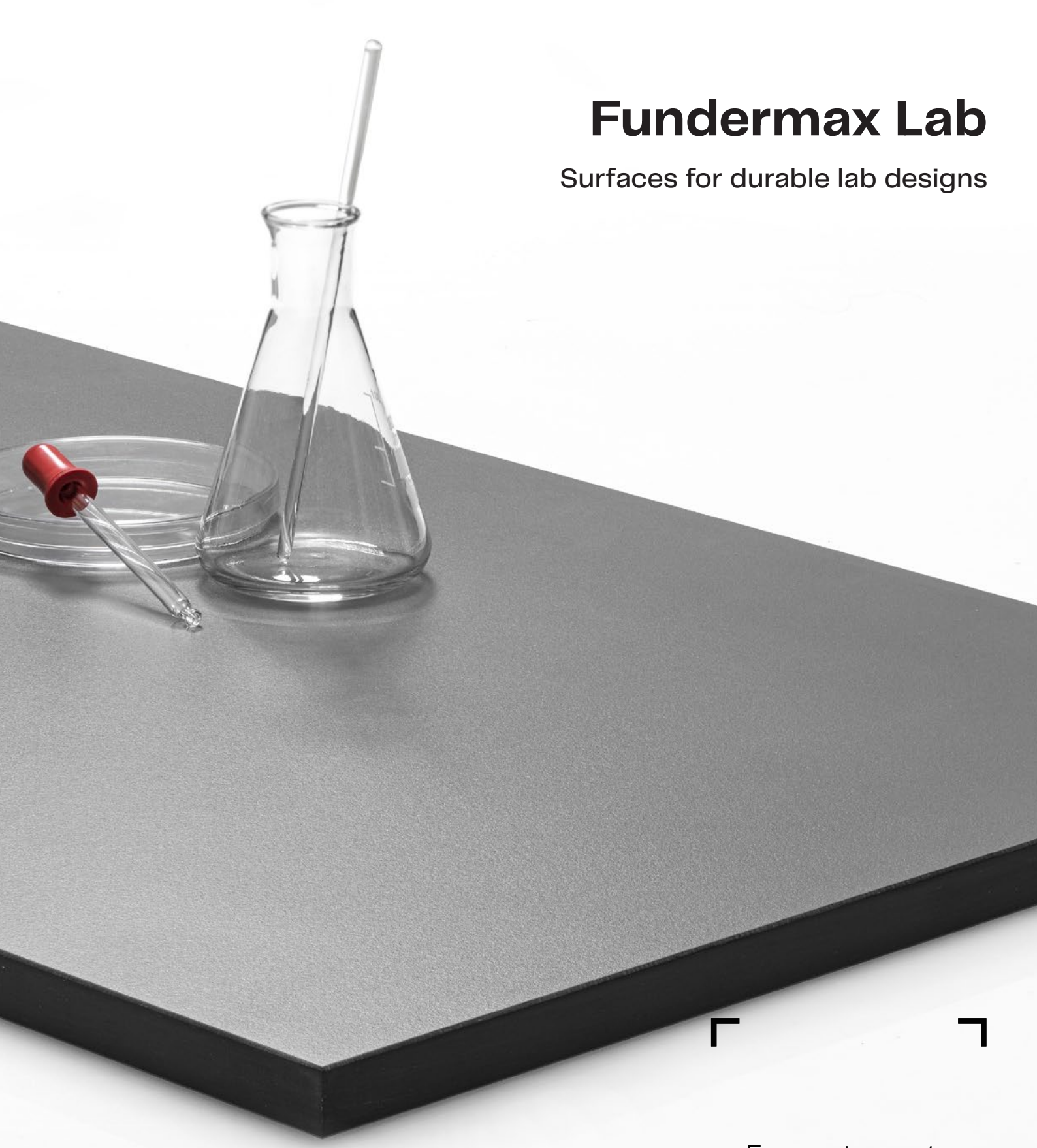


Fundermax Lab

Surfaces for durable lab designs

For you to create

Fundermax

THE RIGHT COMPANY FOR YOUR SOLUTIONS

Fundermax GmbH is a leading European manufacturer of high-quality wood-based materials and decorative laminates that are used worldwide for laboratory, furniture, facades and interior design.

Under the motto “for you to create”, Fundermax forms the interface between idea and material enabling architects, designers and consultants to realize their visions.

The product portfolio ranges from raw particle boards and coated chipboard to laminated panels for indoor and outdoor use, all the way to fire-resistant mineral facade panels.



FACTS AND FIGURES

- Three production sites in Austria
- A production site in Norway
- International sales locations in Europe, India and America
- Approximately 1,400 employees
- Turnover: approximately 460 million euros
- Privately owned by Constantia Industries AG
- Austrian Quality Awards for Company Excellence
- Company ethos on sustainability such as reducing CO_2



THE RIGHT PRODUCTS FOR YOUR APPLICATIONS

Fundermax offers a variety of solutions for your projects. Whether it is for laboratories, hospitals, cleanrooms, furniture, fume-hoods etc.

Combine products for your special needs.
Choose Max Resistance² for worktops, Interior Plus for vertical installation or Compact standard grade for furniture and decorative applications.

MAX RESISTANCE²

Combining the very best intrinsic qualities: extreme resistance to the most aggressive chemicals, inherent strength, long lasting durability, and an easy-to-clean surface. With the unique RE surface technology, Max Resistance² is the superior work surface choice for the most extreme laboratory conditions.
Available in both black and colored cores, it opens up new design possibilities that will last.



MAX COMPACT INTERIOR PLUS

The surface with the plus. The highest standards of hygiene and durability are fulfilled with a specially compressed surface. Max Compact Interior Plus is a high pressure laminate (HPL) in compliance with EN 438 4 type CGS for scientific applications (e.g., laboratories, cleanrooms and hospitals, etc.) with a double-hardened, pore-free, sealed urethane acrylate layer.



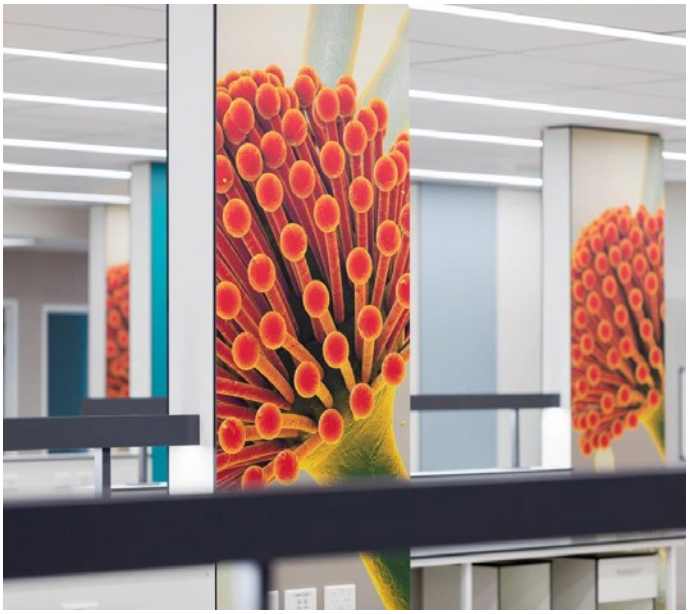
MAX COMPACT INTERIOR

When requirements become more demanding, then only the best will do. Fitting out ambitious buildings is no exception – and is therefore one of the specialty areas of Fundermax. Max Compact Interior provides you with a plethora of possibilities, decors and formats while being truly sustainable.

MAX INDIVIDUALDECOR

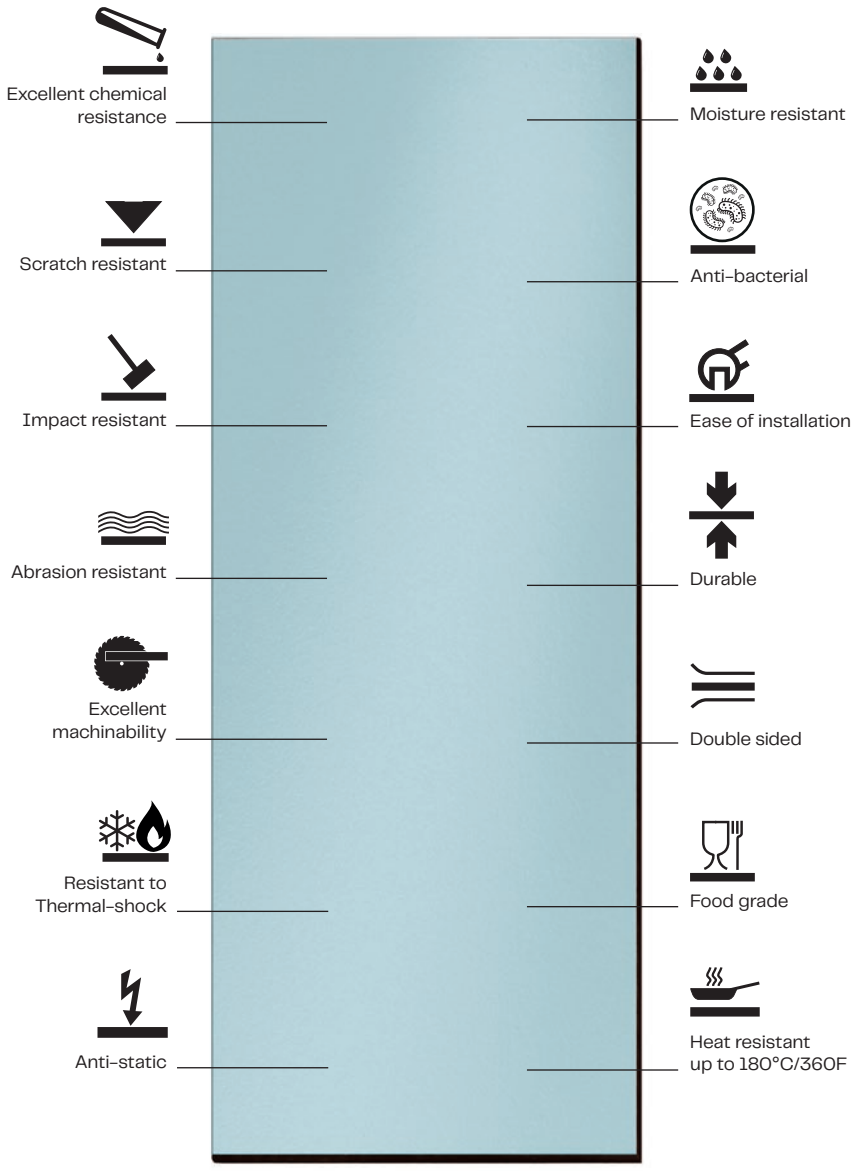
With our digital decors you are able to create individual solutions. If you can think it, we can print it. Furthermore, with brand awareness being ever more important, these printed panels can help building developers and architects provide a distinctive lab space. The utilization of customized graphics can enable the convergence of science and style to singular effect with aesthetic flexibility while promising the durability required.





MAX RESISTANCE²
THE BEST IN ITS CLASS

Max Resistance² combines the very best intrinsic qualities: extreme resistance to the most aggressive chemicals, inherent strength, long lasting durability, and an easy-to-clean surface. What's more, it opens up new design possibilities.



PERMANENTLY RESISTANT

Max Resistance² is extremely resistant to chemical and physical abuse – thanks to Fundermax's patented technology. Created from tested and certified raw materials, compressed at high temperatures under intense pressure, the end result is a homogenous, decorative and extremely resistant panel. As it is completely uniform and joint free, it's also permanently resistant to moisture.

FOR EXTREME DEMANDS

With excellent physical properties coupled with its ability to resist harsh chemicals (including acids) that are used on the open bench across a plethora of industry sectors. Including, but not limited to, laboratories within: Colleges & Universities; Pharma and Biotech; Government; K–12; Clinical Research and Diagnostic; CRO & CMO; Hospitals; as well as other sectors such as the petrochemical & food industries.



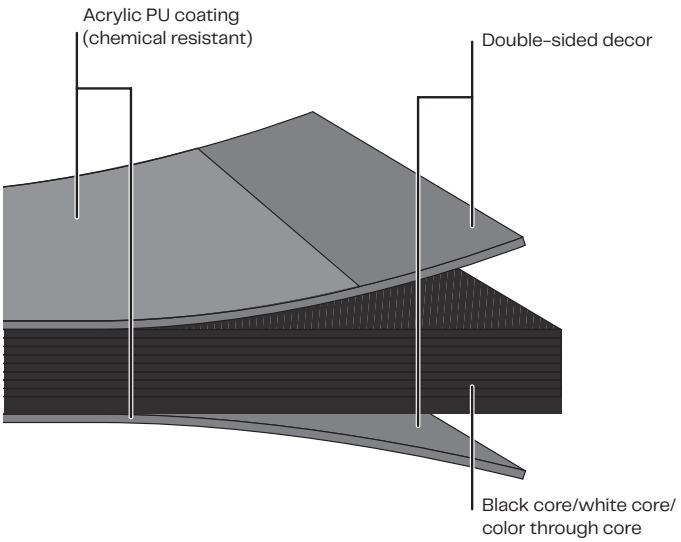
In contrast to other compact work surfaces, Max Resistance² is resilient to the most concentrated or aggressive chemicals, such as Sulfuric, Hydrochloric, Hydrofluoric Acids or Hydrogen Peroxide. Ensuring you can rely on total chemical resistance.

MAX RESISTANCE²

Max Resistance² is a duromer high pressure laminate (HPL), produced in laminate presses, under high pressure at high temperature, in accordance with EN 438-4, type CGS.

Due to its scientifically developed, double-cured polyurethane acrylic coating, Max Resistance² stands up to the toughest tests – unaffected by solvents, most acids and the harshest chemicals. Easy to clean, easy to disinfect and at the same time wear and scratch resistant, this innovative material significantly extends the life cycle of your laboratory work surface.

MAX RESISTANCE² STRUCTURE





OUTSTANDING MECHANICAL AND THERMAL PROPERTIES

Properties tested according to EN 438	Standard requirement	Max Resistance[2]
Physical data		
Density DIN 52350/ISO 1183	≥ 1.35 g/cm³ (≈4.9 lb/inch³)	≥ 1.35 g/cm³ (≈4.9 lb/inch³)
Thickness (e.g.) EN 438-2, point 5		10 mm (≈0.39")
Weight		13.5 kg/m² (≈2.77 lb/sqf)
Mechanical properties		
Resistance to stress abrasion EN 438-2, point 10 (Initial Point)	≥ 150 U	450 U*
Resistance to impact EN 438-2, point 21	≤ 10 mm (≈0.39")	8 mm (≈0.32")
Resistance to scratching EN 438-2, point 25	degree ≥ 3; ≥ 4 N	3 - 4 degree; 4 - 6 N
Flexural strength EN ISO 178	≥ 80 MPa	≥ 80 MPa
E-Modulus EN ISO 178	≥ 9000 MPa	≥ 9000 MPa
Thermal properties		
Dimensional stability measured at elevated temperatures with moisture change EN 438-2, point 17	≤ 0.30 length ≤ 0.60 width	0.15 length 0.3 width
Co-efficiency of thermal expansion DIN 52328	1/K	20 x 10^{-6}
Resistance to dry heat EN 438-2, point 16	4-5 [degree]	4-5 [degree]
Resistance to staining EN 438-2, point 26 (group 1-3)	4-5 [degree]	5 no visible changes, no blisters or cracks
Optical properties		
Light fastness EN 438-2, point 27	≥ 4 [level]	4 or 5
Surface resistance		10^{9} – 10^{12} Ohm

*450 U for all Uni colours, 150 U for Punto decors

SURPASSES ALL TESTS

In addition to chemical resistance, mechanical strength is key when it comes to creating highly durable, long-lasting lab surfaces. This is where Max Resistance[2] comes into its own. Thanks to its innovative patented surface technology, Max Resistance[2] offers a 25% higher impact and scratch resistance, and a 3 times higher abrasion resistance, when compared to EBC or Melamine Surfaces.

10 YEAR WARRANTY

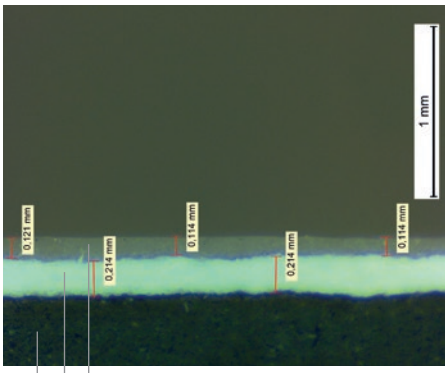
Because of its superior performance, Max Resistance[2] comes with a 10 year extended warranty.

MAX RESISTANCE²
PATENTED SURFACE TECHNOLOGY

Exclusive 'RE technology', developed in-house by Fundermax research scientists, is used in the production of Max Resistance² – perfecting the finish and making it ultimately resistant on both sides. In contrast to surfaces manufactured by means of Electron Beam Curing (EBC) or Melamine technology, the Max Resistance² work surface offers a significantly higher resistance to scratching, impact and abrasion, as well as aggressive acids.

Max Resistance² sets a new standard and considerably increases the life cycle of your laboratory work surface.

FUNDERMAX RE-TECHNOLOGY



Extra thick double-hardened urethane-acrylic surface

Extra thick decor layer

HPL core (Jet-black, phenol impregnated Kraft paper)

EBC-TECHNOLOGY

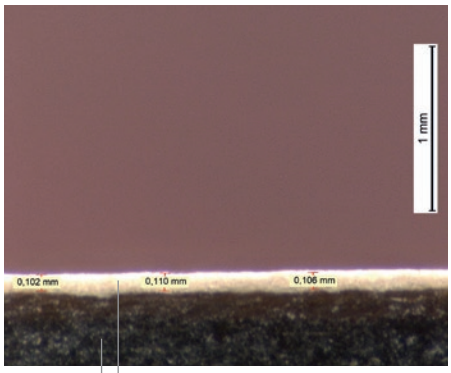


Electron beam cured (EBC) acrylic surface

Decor layer

Fibre or HPL core

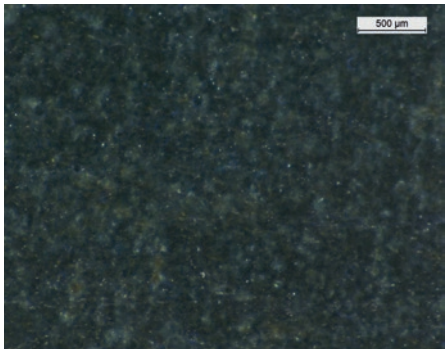
MELAMINE-TECHNOLOGY



Melamine decor surface

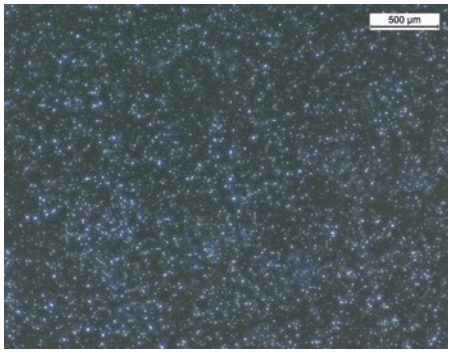
HPL core

RE-SURFACE



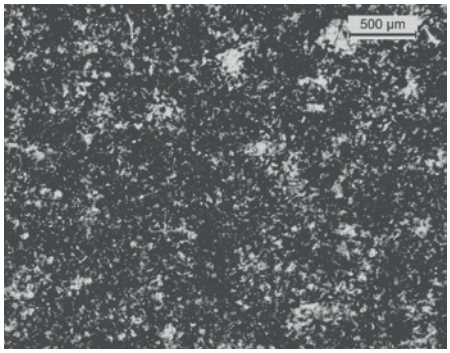
No small pores visible

EBC-SURFACE



Micropores visible

MELAMINE SURFACE



Pores visible

ANTI-BACTERIAL

Because of its non-porous finish, Max Resistance² can be easily disinfected and doesn't support the growth of bacteria.

As a result you can confidently disinfect, knowing that you will kill > 99.99% of germs. Following a deliberate contamination with the aggressive Staphylococcus Aureus and Escherichia Coli bacterias, and subsequent disinfection[1)], it was proven that Max Resistance² was as effective as stainless steel when it comes to disinfection.

These rigorous tests demonstrate the superior performance of Max Resistance² and highlight its suitability for medical, bio-chemical, food and pharmaceutical sectors/laboratories.

In a further test[2)], it was demonstrated that the surface of Max Resistance² is free of micropores. The comparisson to other available surfaces shows that this is a truly unique feature.



1) The following disinfectants were used (in vol. %):
Ethanol 70%, Formalin 5%, P-Chloro-M-Cresol 0.3%, Chloramine T 1%, Chloramine T 5%, Alkyl Benzyl Dimethyl Ammonium Chloride 0.1%

2) Porosity check: application of chalk, Subsequent cleaning and surface examination with microscope

MAX RESISTANCE² MAXIMUM PERFORMANCE

Max Resistance² not only meets the standards set by SEFA 3, it surpasses them; the harshest chemicals applied to horizontal lab surfaces have no impact whatsoever. The surface is resistant to Hydrofluoric Acid and Sulfuric Acid.





Test procedure
The chemical resistance tests were performed in a SEFA certified laboratory according to the Test Method: SEFA 3-2010 Sec 2.1. (24hr Exposure) Detailed information and results are available in the test reports.

Results
Max Resistance[2] passed the SEFA 24h Exposure Test and is therefore suitable and recommended for laboratory worktops. Max Resistance[2] exceeds the SEFA test criteria by far without one single Level 3 rating.

Rating
0 – **No Effect** – No detectable change in the material surface.
1 – **Excellent** – Slight detectable change in color or gloss but no change in function or life of the surface.
2 – **Good** – A clearly discernible change in color or gloss but no significant impairment of surface life or function.
3 – **Fair** – Objectionable change in appearance due to discoloration or etch, possibly resulting in deterioration of function over an extended period of time.

Acceptance criteria
To be approved as laboratory grade surfaces, tested materials should receive no more than four Level 3 ratings.

Substance / Rating	0 No effect	1 Excellent	2 Good	3 Fair
Acids				
Acetic Acid 99%	●			
Dichromate Acid 5% [2]	●			
Chromic Acid 60%	●			
Formic Acid 90% [2]	●			
Hydrochloric Acid 37%	●			
Hydrofluoric Acid 48%		●		
Nitric Acid 20%	●			
Nitric Acid 30%	●			
Nitric Acid 70% [2]			●	
Phosphoric Acid 85%	●			
Sulfuric Acid 33%	●			
Sulfuric Acid 77%	●			
Sulfuric Acid 96%		●		
Sulfuric Acid 77 % Nitric Acid 70% (1:1)			●	
Bases				
Ammonium Hydroxide 28%	●			
Sodium Hydroxide 10%	●			
Sodium Hydroxide 20%	●			
Sodium Hydroxide 40%	●			
Sodium Hydroxide Flake	●			
Salts and Halogens				
Saturated Zinc Chloride	●			
Saturated Silver Nitrate	●			
Tincture of Iodine [1]		●		

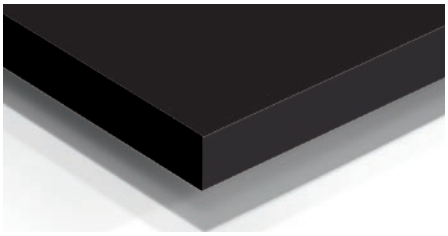
Substance / Rating	0 No effect	1 Excellent	2 Good	3 Fair
Organic Chemicals				
Cresol	●			
Dimethylformamide	●			
Formaldehyde 37%	●			
Furfural[1]		●		
Gasoline	●			
Hydrogen Peroxide 30% [2]	●			
Hydrogen Peroxide 3%	●			
Phenol 90%		●		
Sodium Sulfide Saturated	●			
Solvents				
Acetone [2]	●			
Amyl Acetate	●			
Benzene	●			
Butyl Alcohol	●			
Carbon Tetrachloride	●			
Chloroform [2]	●			
Dichloracetic Acid [2]		●		
Dioxane	●			
Diethyl Ether	●			
Ethyl Acetate [1]	●			
Ethyl Alcohol	●			
Methyl Alcohol	●			
Methylene Chloride	●			
Methyl Ethyl Ketone	●			
Monochlorobenzene	●			
Napthalene	●			
Toluene	●			
Trichloroethylene	●			
Xylene [1]	●			

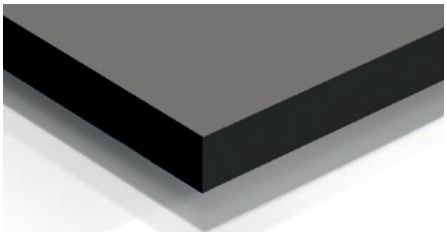
Test results may differ by color
[1] Result on 0082
[2] Result on 0085

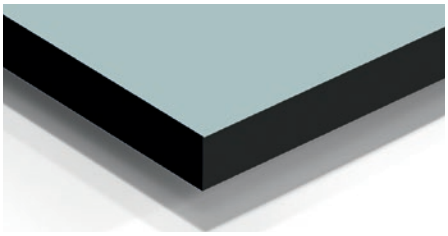


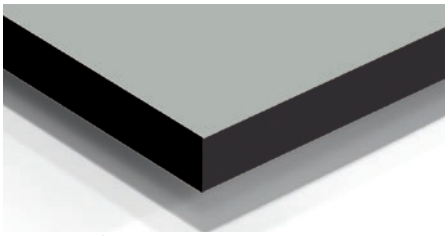
MAX RESISTANCE²
THE COLLECTION WITH BLACK CORE

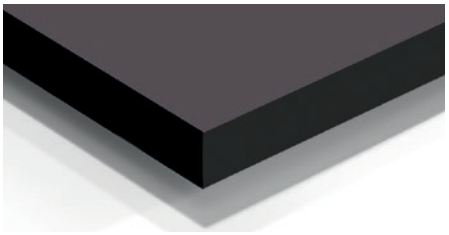
Max Resistance² makes life so much easier.
With its deep black core and double sided resistant decor, you can maximise your design and reduce waste during fabrication. Extra high resin content and careful manufacturing results in a consistent depth of color, removing the need for edge treatment.

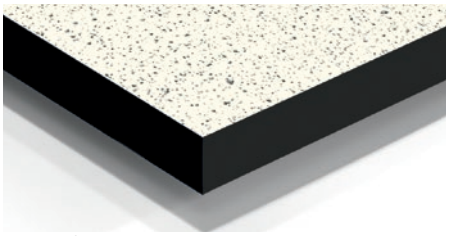

0082 Deep Black

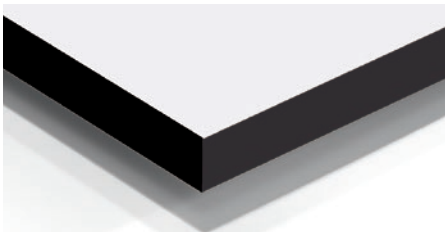

2181 Volcano Grey

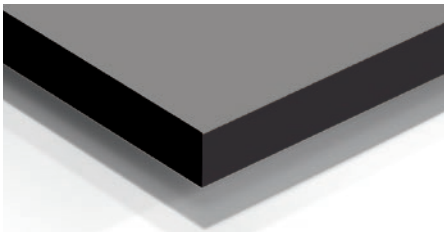

0706 Glacier Blue

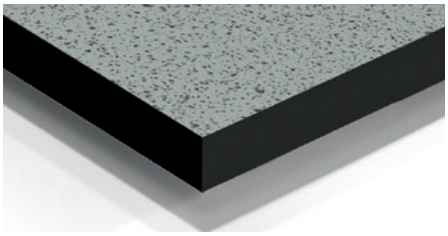

0074 Pastel Grey

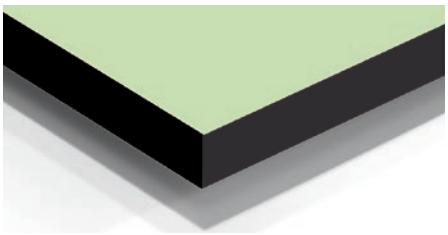

0077 Charcoal

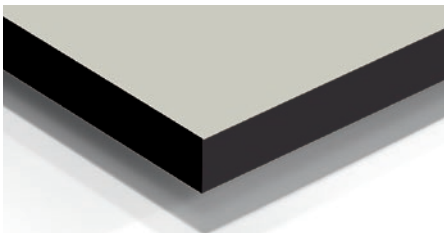

0558 White Punto

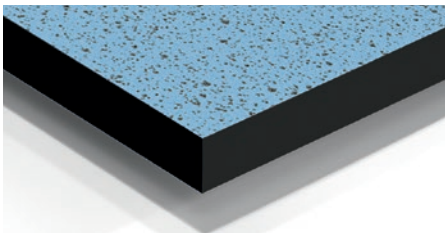

0606 Arctic White

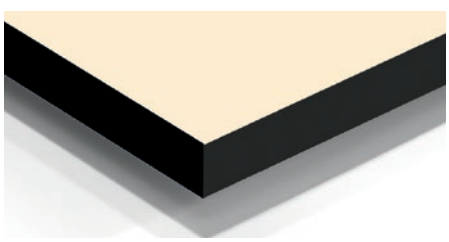

0075 Dark Grey

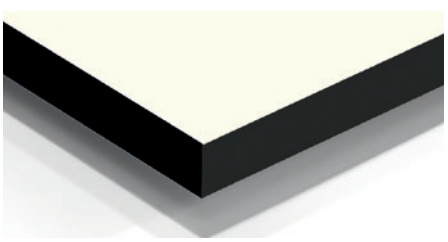

0559 Pastel Grey Punto

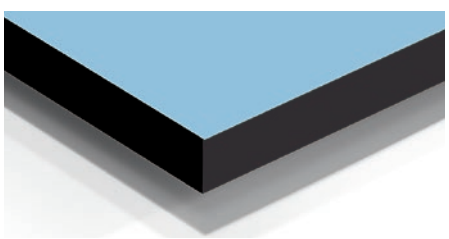

0592 Kiwi Green


0741 Birch Grey


3361 Punto Arctic


0851 Winter White


0085 White


0718 Arctic

Color variations from the original decors are caused by the technical limitations of the printing process. Please request an original sample.

MAX RESISTANCE²
THE COLLECTION WITH COLOR THROUGH CORE

As a new feature some panels are available with a color through core. That means the core has the same color as the surface layer.

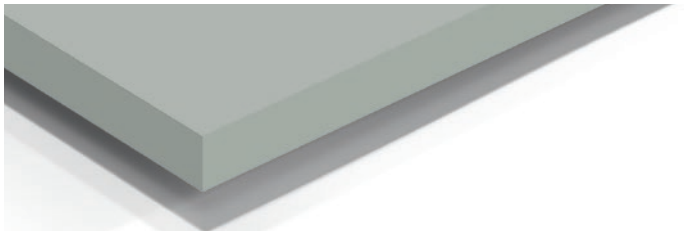
In large, design oriented projects, surfaces, colors and textures can be coordinated with Fundermax's extensive product range – ensuring a unique and contemporary design.



0085 White **with color through core**



0077 Charcoal **with color through core**



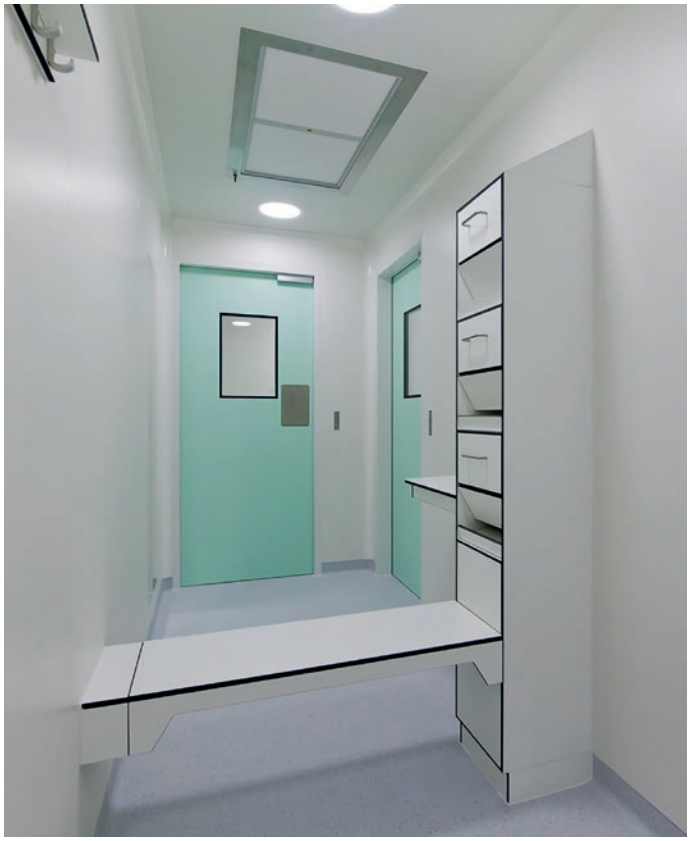
0074 Pastel Grey **with color through core**



MAX COMPACT INTERIOR PLUS

These Max Compact boards are designed for use in heavily frequented areas with more intensive cleaning or hygienic requirements, such as in hospitals, health & education, sanitary rooms in hotels and in public areas, as well as buildings with occasionally increased risk of infection (airports, train stations), industrial kitchens, food industry and public transport.

Due to its outstanding surface Max Compact Interior Plus panels are easy to clean and disinfect. The anti-bacterial properties of the material make it the perfect choice for operating rooms.





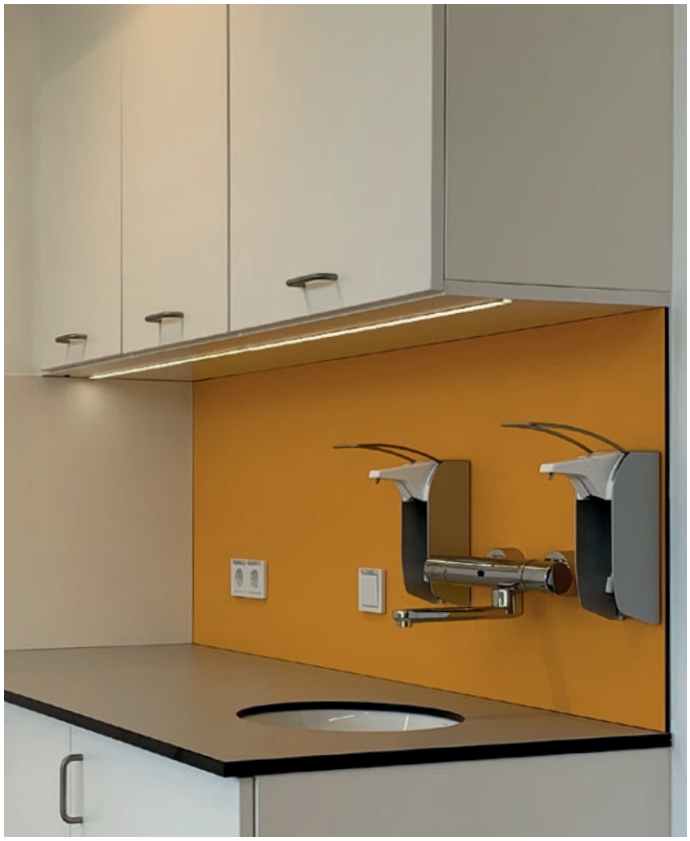
Max Compact Interior Plus panels are available with over 120 decors from the current Exterior Collection.

MAX COMPACT INTERIOR

It sounds relatively easy to supply furniture for a laboratory, for example, or to provide the internal lining for a cleanroom. But then the questions of detail arise: is the material acid-resistant without any limitations? Can it resist permanent humidity? Can soiling, even graffiti, be easily removed?

Max Compact Interior from Fundermax is a range of HPL – High Pressure Laminates that can answer all these questions with YES without exception.

And in addition: rooms subject to high demands are often particularly elaborate in their design.
A grey hospital?
A monotone industrial kitchen?
A gloomy laboratory?
All unthinkable – and also unnecessary.
Max Compact Interior uses the entire color pallet of life and brings this special atmosphere in any conceivable application area.





Max Compact Interior panels are availble in over 150 decors from the current Interior Collection and with possibilities of the Individualdecor.

PRODUCTS FOR LABORATORIES SUMMARY

In addition to Max Resistance[2], Fundermax offers a wide range of compatible high quality products, purposely designed for the diverse challenges of the laboratory and related healthcare industries.

	Max Resistance[2]	Compact Interior Plus	Compact Interior
Surface	RE	IP	FH, MT [1)]
Technology	RE–Technology	IP–Technology	Melamine
Size in mm / inch	OF = 3660 x 1630/144.09“ x 64.17“ XL = 4100 x 1854/161.42“ x 72.99“	XL = 4100 x 1854/161.42“ x 72.99“ JU = 4100 x 1300/161.42“ x 51.18“ GR = 2800 x 1300/110.24“ x 51.18“ SP = 2800 x 1854/110.24“ x 72.99“	XL = 4100 x 1854/161.42“ x 72.99“ JU = 4100 x 1300/161.42“ x 51.18“ GR = 2800 x 1300/110.24“ x 51.18“ TK = 2140 x 1060/84.25“ x 41.73“ SP = 2800 x 1854/110.24“ x 72.99“
Thickness	4 mm–25 mm (OF)/1/6"–1" 4 mm–20 mm (XL)/1/6"–3/4"	2–20 mm (XL, JU, GR) 2–15 mm (SP)	2–20 mm (XL, TK) 2–25 mm (JU, GR) 2–15 mm (SP)
Range of decors	15 Standard Decors; others available on request	> 120 Decors (Max Exterior Collection)	> 150 Decors (Fundermax Interior Collection)
Individualdecor			✓
Chemical resistance of the surface	excellent	high	medium
Core	Black, color through*	Black	Black, color through*
Impact resistance	very high	very high	very high
Scratch and abrasion resistance	excellent	very high	very high
General and wet chemistry	✓✓	✓	
Bio–chemistry and medical sector	✓✓	✓	
Petrochemical industry	✓✓	✓	
Pharma, food and beverage industries	✓✓	✓	
Technical work stations	✓✓	✓✓	✓
Office work stations	✓✓	✓✓	✓✓
Application	Laboratory worktops and shelves, splash–backs, work space dividers, fume–hood tops and lining, wide range of horizontal and vertical applications.	For demanding applications in heavily frequented areas with higher cleaning or hygiene requirements.	Interior wall protection, cabinets and shelving in light or non–chemical environments.

✓✓ = Ideal ✓= Suitable *limited decor palette
1) Feasible surfaces/format combination according to the product range.
NOTE: as surfaces RE, IP and FH have the same surface structure/finish, they can be combined perfectly.
Slight variations in color & appearance can occur. Max Resistance[2] decors are available across the range (with 100% compatibilty).

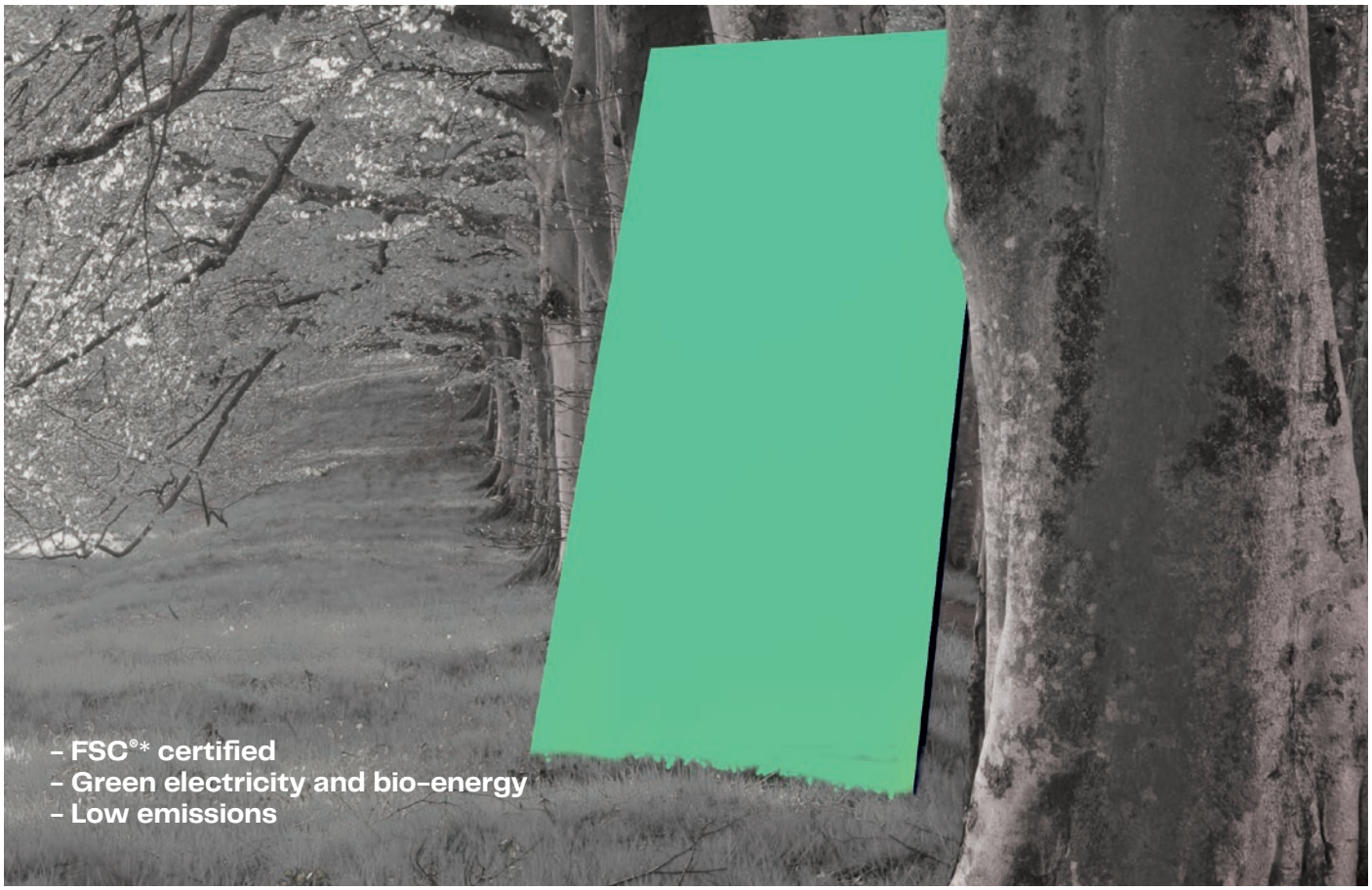
SUSTAINABLE PRODUCT DESIGN

ENVIRONMENTALLY FRIENDLY PRODUCTION

During the manufacture of Fundermax Compact panels, kraft paper is impregnated with resin, dried and compressed at high pressure – producing highly durable and moisture resistant panels. The waste from this process is treated (by regenerative thermal oxidation) and then re-used, achieving an entirely closed production cycle.

NATURAL MATERIALS

Fundermax panels are primarily made from 'by-product' wood, produced in saw mills and from logging, which is then processed into 'kraft paper'. Fundermax procures these raw materials from suppliers who hold FSC® or PEFC™ certification. These standards confirm that all logging is carried out in accordance with international rules for sustainable forestry.



* Please find further information at www.fundermax.at

PEFC PEFC/06-35-246

FSC www.fsc.org FSC® C101962 The mark of responsible forestry

SEFA MEMBER

GREENGUARD PRODUCT CERTIFIED FOR LOW CHEMICAL EMISSIONS UL.COM/GG UL 2818 GOLD

mindful MATERIALS

THIRD-PARTY VERIFIED EPD ISO 14025 and EN 15804 Institut Bauen und Umwelt e.V.

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