

Interior Pro 2.3 Lab

Issue June 2024

www.fundermax.com



For you to create



Fundermax





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Fundermax

From furniture and facades to interior design, Fundermax is at the interface of ideas and materials. Today the company – which has a proud history spanning 130 years – stands as a global market leader and producer of high quality materials using wood and laminates. Our lasting success has been based on high quality, imaginative design, diversity and sustainable production. Our products are “Made in Austria” and exude a love for the natural resources of wood, creativity and inventiveness.

- modern production facilities in Austria and Norway
- approx. 1,500 employees
- annual turnover of €500 million
- part of Constantia Industries AG
- The Austrian Excellence Award (2018)

1 Product information

The right products for your applications

Fundermax offers a variety of solutions for your projects. Whether it is for laboratories, hospitals, cleanrooms, furniture or fume-hoods. 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 coloured cores, it opens up new design possibilities that will last.

Max Resistance² not only fulfils the requirements of the SEFA3 standard for chemical resistance of horizontal laboratory surfaces – it clearly exceeds them.



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) with a double-hardened, pore-free, sealed polyurethane acrylate layer.

Max Compact Interior Plus fulfils the requirements of the SEFA8 standard.

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 Resistance²

SP	2800x1854	6 / 13 / 16 / 19 / 20 / 25 mm
OF	3670x1630	6 / 13 / 16 / 19 / 20 / 25 mm
XL	4100x1854	6 / 13 / 16 / 19 / 20 mm

Available in black core and coloured cores.

Compact Interior Plus

GR	2800x1300	6 / 13 / 16 / 19 / 20 mm
SP	2800x1854	6 / 13 mm
OF	3670x1630	6 / 13 / 16 / 19 / 20 / 25 mm
JU	4100x1300	6 / 13 / 16 / 19 / 20 mm
XL	4100x1854	6 / 13 / 16 / 19 / 20 mm

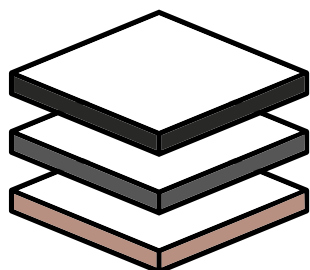
Available in black core and black core F-quality.

Compact Interior FH

GR	2800x1300	6 / 13 / 16 / 19 / 20 mm
SP	2800x1854	6 / 13 / 16 / 19 / 20 / 25 mm
OF	3670x1630	6 / 13 / 16 / 19 / 20 / 25 mm
JU	4100x1300	6 / 13 / 16 / 19 / 20 mm
XL	4100x1854	6 / 13 / 16 / 19 / 20 mm

Available in black core, black core F-quality and coloured cores.

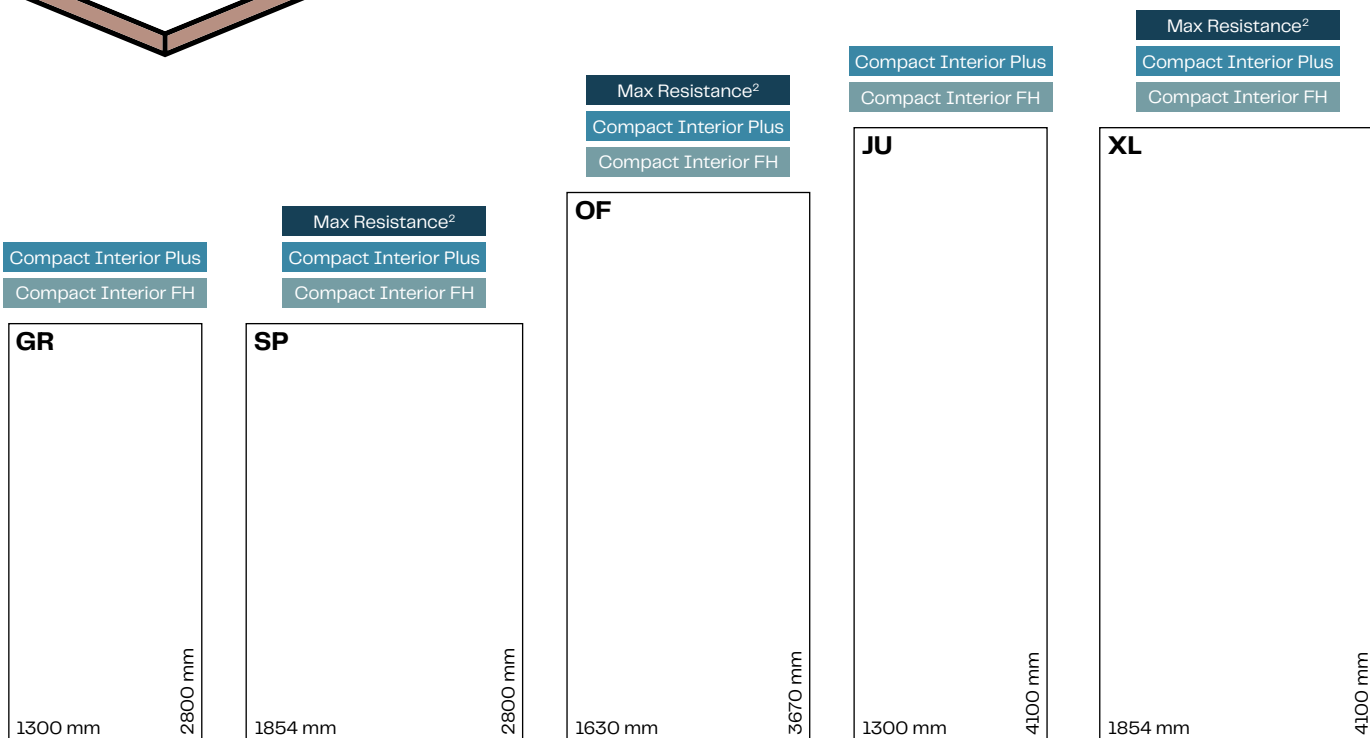
core colours



Black Core

Black Core F-Quality

Coloured Core



Individual Print

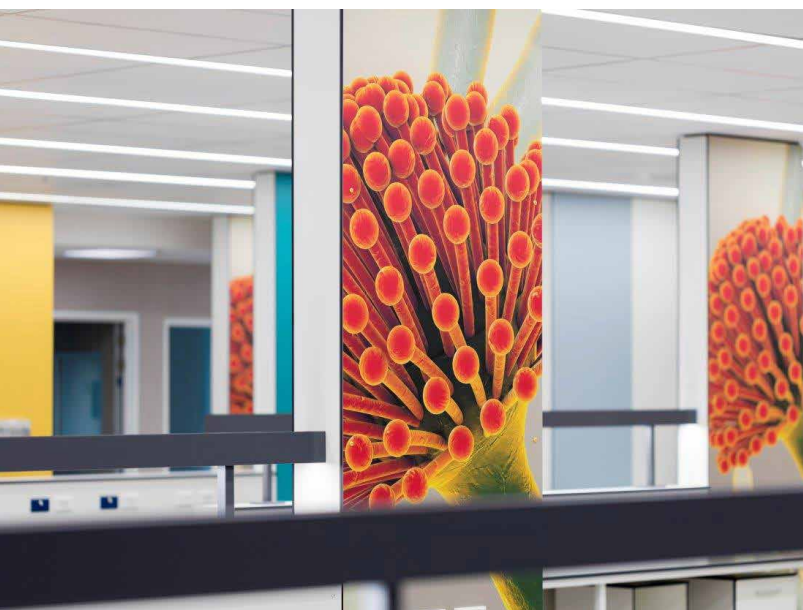
Fundermax Individual Print gives you all the freedom you need to design your project creatively and uniquely. Your design can be printed either on individual panels or across several panels. Available as Max HPL and Max Compact.

With our digital decors you can create customised solutions. If you can imagine it, we can print it. As branding becomes increasingly important, these wall panels can help builders and architects create a distinctive lab.

Using customised graphics can bring the convergence of science and style to create a unique effect with aesthetic flexibility while maintaining the product's outstanding features.



Contact:
individual.druck@fundermax.biz



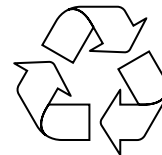
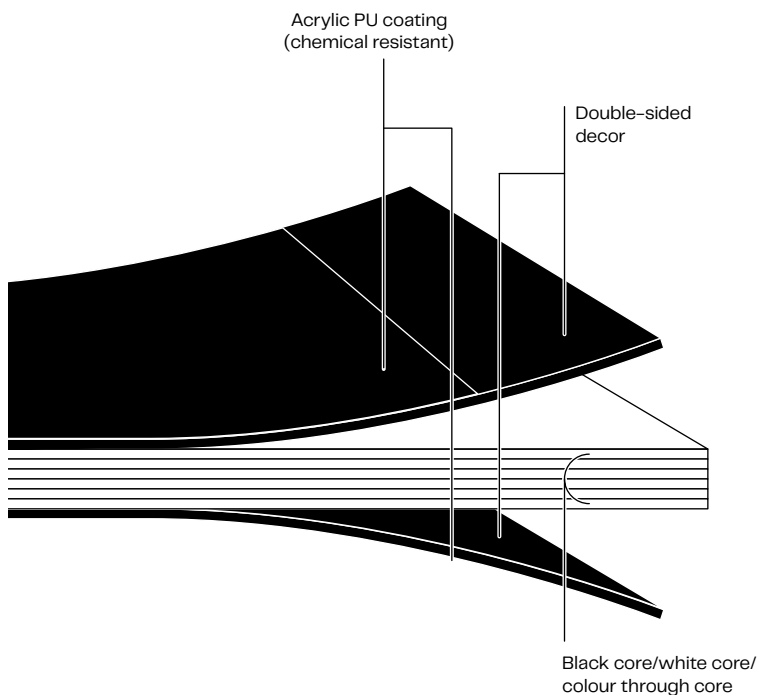
2 Surfaces and decors

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



100% sustainable core paper

We create products with a sustainable design and by using recycled wood and recycled paper, we use natural resources for as long as possible.

At our Ranheim site in Norway, we produce kraft paper from 100% recycled paper, which is used in our Max Compact Interior panels.

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/cm ³ (=0.049 lb/inch ³)	≥ 1.35 g/cm ³ (=0.049 lb/inch ³)
Thickness (e.g) EN 438-2, point 5		10 mm (=0.39")
Weight		13.5 kg/m ² (=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 [level]
Surface resistance		
		10 ⁹ - 10 ¹² Ohm

*450 U for all Uni colors, 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 Resistance² comes into its own. Thanks to its innovative patented surface technology, Max Resistance² 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 Resistance² comes with a 10 year extended warranty.

Sustainable

In addition to its outstanding performance, using Max Resistance² is also a sustainable choice. Thanks to its exceptional longevity, it reduces the need for frequent replacement and thus minimises the consumption of resources. With a service life that far exceeds the industry standard, Max Resistance² helps to reduce the ecological footprint and supports a sustainable working environment in the laboratory.

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.



moisture resistant



food grade

excellent
machinabilityheat resistant
up to 180°C/360F

perfectly disinfectable



double sided



durable

excellent chemical
resistanceresistant to
thermal-shock

easy to clean



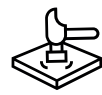
anti-static



scratch resistant



ease of installation



impact resistant

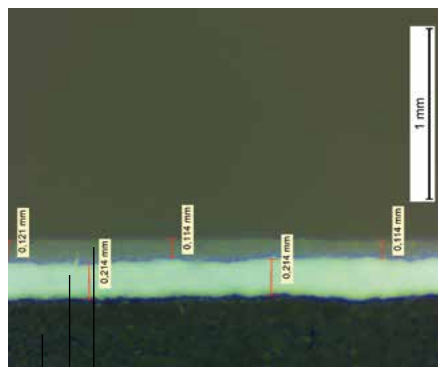


Max Resistance² Patented surface technology

RE-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



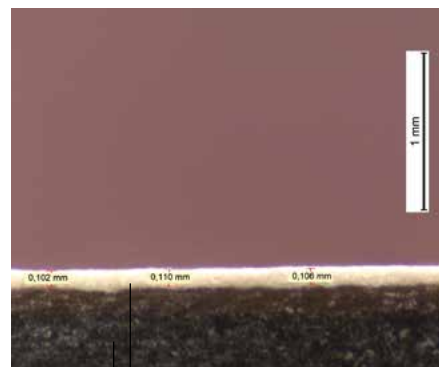
- Extra thick double-hardened urethane-acrylic surface
- Extra thick decor layer
- HPL core (Jet-black, phenol impregnated Kraft paper)

EBC-Technology



- Electron beam cured (EBC) acrylic surface
- Decor layer
- Fibre or HPL core

Melamine-Technology



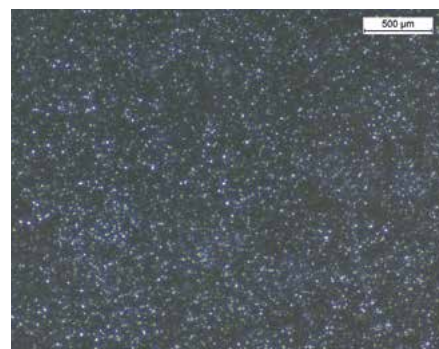
- Melamine decor surface
- HPL core

RE-surface



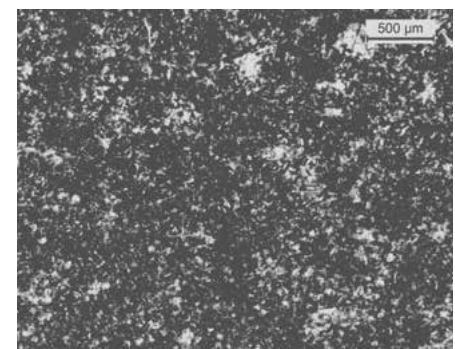
No micro-pores visible

EBC-surface



Micro-pores visible

Melamine-surface



Pores visible

Perfect disinfectability

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 disinfection¹⁾, 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 test²⁾, it was demonstrated that the surface of Max Resistance² is free of micro-pores. The comparison to other available surfaces shows that this is a truly unique feature.

Advantages:

- bacterial growth is prevented
- durable surface
- excellent cleanability
- no discolouration of the surface

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 dust, 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 Resistance² passed the SEFA 24h Exposure Test and is therefore suitable and recommended for laboratory worktops. Max Resistance² 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 colour or gloss but no change in function or life of the surface.
- 2 – Good** – A clearly discernible change in colour or gloss but no significant impairment of surface life or function.
- 3 – Fair** – Objectionable change in appearance due to discolouration 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
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Substance	Rating	0 No effect	1 Excellent	2 Good	3 Fair
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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)				●	

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⁾	●				
Dichloroacetic Acid ²⁾			●		
Dioxane	●				
Diethyl Ether	●				
Ethyl Acetate ¹⁾	●				
Ethyl Alcohol	●				
Methyl Alcohol	●				
Methylene Chloride	●				
Methyl Ethyl Ketone	●				
Monochlorobenzene	●				
Napthalene	●				
Toluene	●				
Trichloroethylene	●				
Xylene ¹⁾	●				

Bases

Ammonium Hydroxide 28%	●				
Sodium Hydroxide 10%	●				
Sodium Hydroxide 20%	●				
Sodium Hydroxide 40%	●				
Sodium Hydroxide Flake	●				

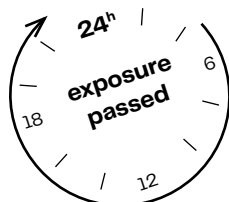
Salts and Halogens

Saturated Zinc Chloride	●				
Saturated Silver Nitrate	●				
Tincture of Iodine ¹⁾			●		

Test results may differ by colour

¹⁾ Result on 0082 Deep Black

²⁾ Result on 0085 White





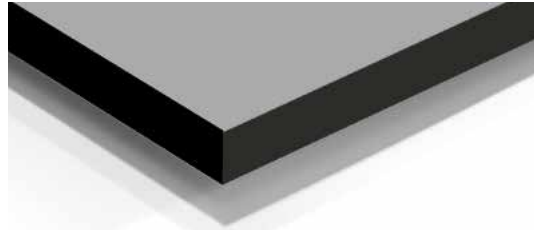
Max Resistance²

The collection with black core

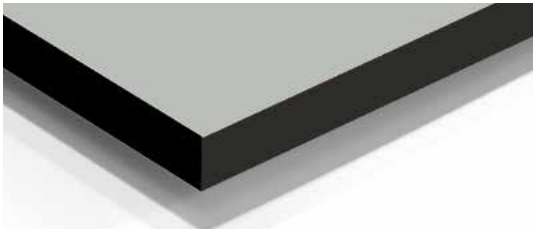
With its deep black core and double sided resistant decor, you can maximise your design and reduce waste during fabrication. Extra high resin content and careful manufacturing results in a consistent depth of colour, removing the need for edge treatment.



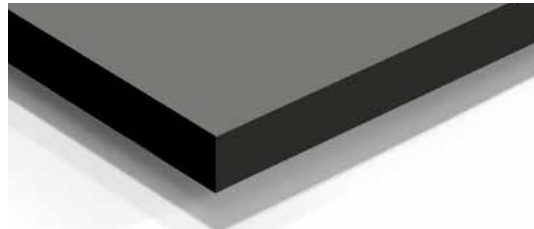
0082 Deep Black



0753 Cool Grey Medium



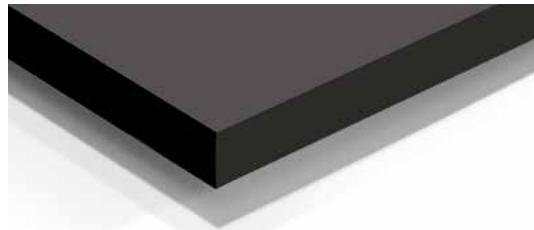
0074 Pastel Grey



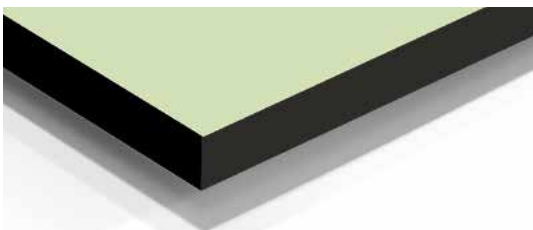
2181 Volcano Grey



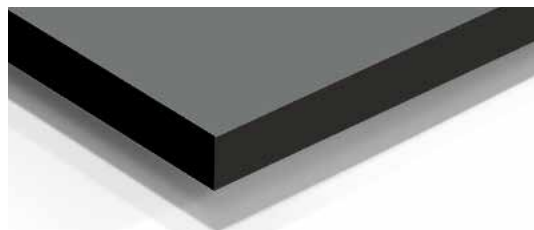
0606 Arctic White



0077 Charcoal



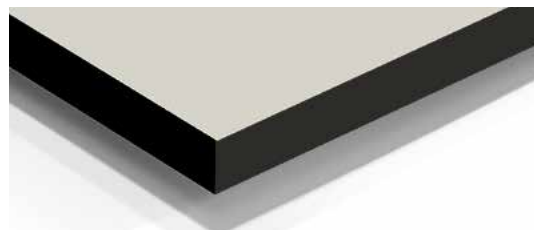
0592 Kiwi Green



0075 Dark Grey



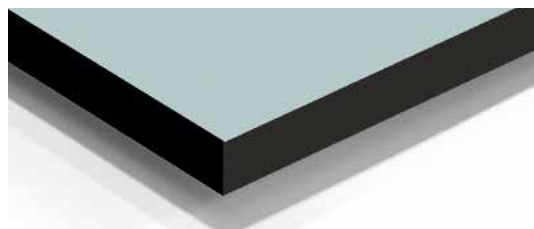
0851 Winter White



0741 Birch Grey



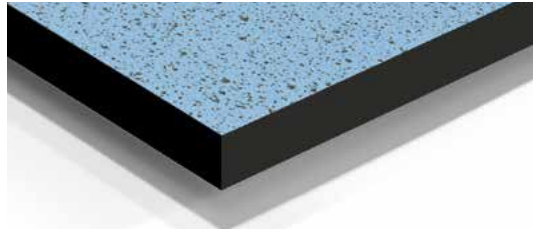
0085 White



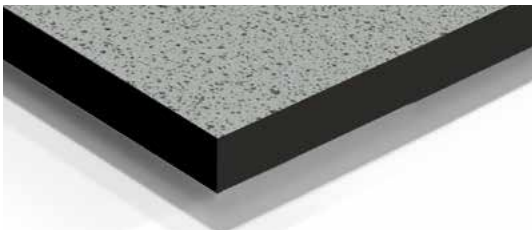
0706 Glacier Blue



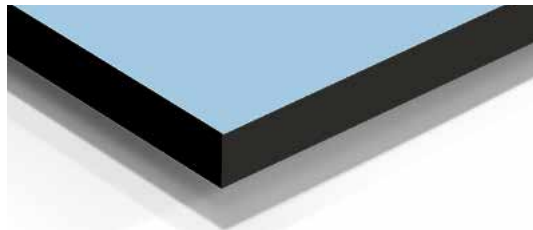
0558 White Punto



3361 Punto Arctic



0559 Pastel Grey Punto



0718 Arctic

Max Resistance²

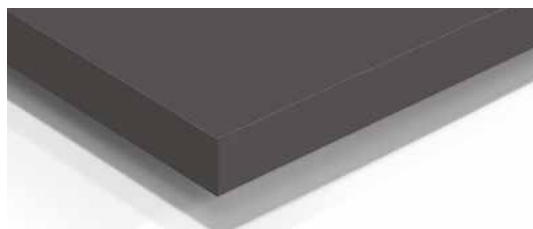
The collection with colour through core

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

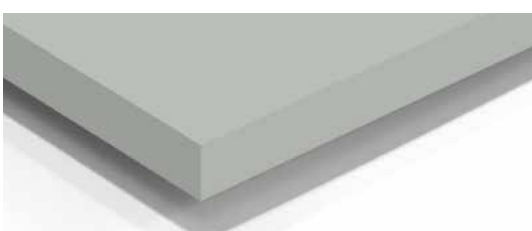
In large, design oriented projects, surfaces, colours and textures can be coordinated with Fundermax's extensive product range - ensuring a unique and contemporary design.



0085 White (with coloured through core)



0077 Charcoal (with coloured through core)



0074 Pastel Grey (with coloured through core)



2181 Volcano Grey (with coloured through core)

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

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.

Physical Data	Test method	Actual value
Density	EN 438	≥ 1,35 g/cm ²
Optical properties	Test method	Actual value
Light-fastness (Greyscale)	EN 438	≥ 4
Water vapour diffusion resistance	EN 438	≥ 4
Mechanical properties	Test method	Actual value
Flexural strength	EN 438	≥ 80 MPa
Modulus of elasticity	EN 438	≥ 9000 MPa
Tensile strength	EN 438	≥ 60 MPa
Fire behaviour	EN 13501-1	on request in F-Quality B-s2, d0
Scratch resistance		degree ≥ 3,5 ≥ 4 N
Chemical resistance		not depending on colour (24 h Test) All solvents Hydrochloric acid 10% Phosphoric acid 10% Acetic 10% Sodium hypochlorite 13% Soda lye 25% Ammonia 25%



Max Compact Interior Plus panels are available with 132 decors from the current Exterior 2.3 | Essential 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 Compact 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 colour pallet of life and brings this special atmosphere in any conceivable application area.



Max Compact Interior panels are available in 213 decors from the current Interior 2.3 | Essential Collection and with possibilities of the Individualdecor.

3 Summarising overview

In addition to Max Resistance², 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⁾
Size in mm / inch	Black core: XL = 4100 x 1854/161.42" x 72.99" SP = 2800 x 1854/110.24" x 72.99" OF = 3670 x 1630/144.49" x 64.17" Coloured through core: XL = 4100 x 1854/161.42" x 72.99" OF = 3670 x 1630/144.49" x 64.17"	XL = 4100 x 1854/161.42" x 72.99" SP = 2800 x 1854/110.24" x 72.99" JU = 4100 x 1300/161.42" x 51.18" GR = 2800 x 1300/110.24" x 51.18" OF = 3670 x 1630/144.49" x 64.17"	Black core: 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" OF = 3670 x 1630/144.49" x 64.17" Coloured through core: XL = 4100 x 1854/161.42" x 72.99" OF = 3670 x 1630/144.49" x 64.17"
Thickness	Black core: 6 mm-20 mm (XL) 6 mm-25 mm (SP, OF) Coloured through core: 13 mm-20 mm (XL) 13 mm-25 mm (OF)	6-15 mm (SP) 6-20 mm (XL, JU, GR, OF)	Black core: 6-20 mm (XL, JU, GR, SP) 6-25 mm (OF) Coloured through core: 6-20 mm (XL, JU, GR, SP) 6-25 mm (OF)
Range of decors	16 standard decors; others available on request	132 decors (Exterior 2.3 Essential Collection)	213 decors (Interior 2.3 Essential Collection)
Individualdecor		on request	✓
Chemical resistance of the surface	excellent	high	medium
Core	black, colour through	black	black, white, grey
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 colour & appearance can occur. Max Resistance² decors are available across the range (with 100% compatibility).



You can find more information on the chemical resistance of Max Compact Interior, Max Compact Interior Plus and Max Compact Resistance², as well as everything else you need to know about processing & Co, in our Technical Information Interior at www.fundermax.com or under this QR code.



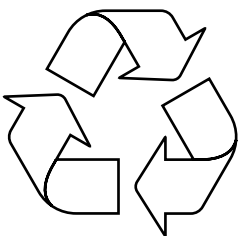
Sustainable product design

Environmentally friendly production

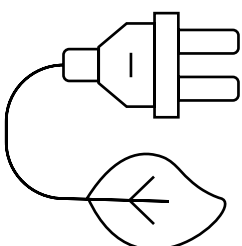
During the manufacture of Fundermax Compact panels, kraft paper is impregnated with resin, dried and compressed at high pressure – producing highly durable and moisture resistant panels. The waste from this process is treated (by regenerative thermal oxidation) and then re-used, achieving an entirely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



100% of the raw material is recycled cardboard
100% of production waste is recycled into paper



100% of the electricity is hydroelectric
100% of transport to our production sites is by train or boat

Fundermax Deutschland GmbH

Mundenheimer Weg 2
D-67117 Limburgerhof
info@fundermax.biz
www.fundermax.com

Fundermax France S.a.r.l.

3 Cours Albert Thomas
F-69003 Lyon
T +33 (0)4 78 68 28 31
infofrance@fundermax.biz
www.fundermax.com

Fundermax India Pvt. Ltd.

Sy. No. 7, Honnenahalli, Doddballapur Road,
IND-Yelahanka Hobli, Bangalore - 560064
T +96113 99211
officeindia@fundermax.biz
www.fundermax.in

Fundermax Italia s.r.l.

Viale Venezia 22
I-33052 Cervignano del Friuli
infoitaly@fundermax.biz
www.fundermax.com

Fundermax North America, Inc.

9401-P Southern Pine Blvd.
Charlotte, NC 28273, U.S.
T +1 980 299 0035
office.america@fundermax.biz
www.fundermax.us

Fundermax Polska Sp. z o.o.

ul. Rybitwy 12
PL-30-722 Kraków
T +48 (0)12 65 34 528
infopoland@fundermax.biz

Fundermax Swiss AG

Industriestrasse 38
CH-5314 Kleindöttingen
T +41 (0)56 268 83 11
infoswiss@fundermax.biz
www.fundermax.com

Fundermax GmbH

Klagenfurter Straße 87-89, A-9300 St. Veit/Glan
T: +43 (0)5 9494-0, F: +43 (0)5 9494-4200
office@fundermax.at
www.fundermax.com

