

TRANSPORTATION
CONTRACT SURFACES



800



MONDO'S PRODUCTION SITE AT GALLO D'ALBA

Our history

FACTS AND FIGURES

We operate in 196 nations, with 13 production sites, 30 subsidiaries and 1500 employees

Established as a family-run business in 1948, Mondo has created inventions, filed patents and achieved great successes in over 60 years, to become a major group with 30 subsidiaries located in Europe, America and Asia. Today, the company employs more than 1,500 people at 13 production sites and distributes its products in 196 nations where it is universally recognised as the world's leading manufacturer of residential and sports flooring.





Environmentally friendly flooring

A NATURAL CHOICE

Mondo flooring respects the environment, during each stage of its lifecycle, from production to installation, use and disposal

OUR GOALS

- Eliminating hazardous chemical substances from production processes.
- Producing materials that are entirely recyclable, with a reduced environmental impact.
- Lowering the cost of product lifecycles.

These are just some of the goals Mondo is committed to achieving.

PRODUCTION

To honour our commitments, we carefully monitor each stage of the production cycle, to minimise waste and eliminate any potentially hazardous substance. Even our most technologically advanced surfaces are free of plasticizers, heavy metals,

asbestos, chlorine and halogen. This focus during production makes our products 100% recyclable up to the end of their lifecycle.

ENVIRONMENTALLY FRIENDLY

Mondo products are made using natural and synthetic raw materials which are not considered hazardous according to the most stringent national and international standards. We source raw materials with the utmost attention and continually test them, at our production sites too. Additional safety testing is carried out at independent certified laboratories that assess our products for conformity to environmental protection regulations.



RECYCLABLE MATERIALS



ORGANIC PIGMENTS



NATURAL RUBBER



CLEAN ENERGY

COVERING A SURFACE AREA EQUIVALENT TO SIX FOOTBALL PITCHES, THE PHOTOVOLTAIC PLANT AT GALLO D'ALBA IS ONE OF ITALY'S LARGEST, WITH 35,000 M² OF CELLS PRODUCING A 4.6 MEGAWATTS-PEAK, FOR ELECTRICITY THAT COULD SUPPLY MORE THAN 1,600 FAMILIES, BUT WITH ANNUAL CO₂ EMISSIONS REDUCED BY MORE THAN 2,000 TONS, SULPHUR DIOXIDE EMISSIONS REDUCED BY NEARLY 3 TONS, NITROGEN OXIDES BY 2 TONS AND FINE PARTICULATE MATTER BY JUST UNDER 100 KILOS. THESE ARE THE FIGURES BEHIND THE PLANT INSTALLED AT MONDO'S SITE WHICH HAS BEEN OPERATING SINCE LATE 2010. THE GALLO D'ALBA INSTALLATION IS A ZERO IMPACT PLANT, ALSO IN TERMS OF VISUAL IMPACT, AND IS CONCRETE PROOF OF MONDO'S COMMITMENT TO PROTECTING THE ENVIRONMENT AND ACHIEVING ENERGY SELF-SUFFICIENCY.



Innovation and research

IN COLOUR

Each year we invest 6% of revenues on research and development.

OUR GOAL

Improving the quality of life in public and private places, with a clever use of colours and light based on end user profiles.

the physical and psychological aspects of users in a given environment, based on neuroscience combined with design, in a study which the designers call the "Science of Colour".

RESEARCH

Such an ambitious goal calls for solid scientific foundations. That's why Mondo commissioned Giulio Bertagna and Aldo Bottoli, from the Italian design practice Studio B&B Colourdesign, to develop a colour scheme based on user profiles. The designers examined

THE RESULT

The study by Giulio Bertagna and Aldo Bottoli resulted in an easy-to-use colour scheme which sorts colours by use. New colours are sorted in themed schemes, based on the HML system.



THE HML SYSTEM IS THE BRAINCHILD OF GIULIO BERTAGNA AND ALDO BOTTOLI (B&B COLOURDESIGN), AND AIMS TO HELP DESIGNERS SELECT COLOURS AND SORT SAMPLES BY COLOUR GROUPS (YELLOWS [Y], REDS [R], BLUES [B] AND GREENS [G]) AND THEN INTO FAMILIES BASED ON THEIR FREQUENCY (HIGH [H], MEDIUM [M] AND LOW [L] WHICH CORRESPOND TO SHORT, MEDIUM AND LONG WAVELENGTHS RESPECTIVELY).

SAFETY DURABILITY

FIRE -

SMOKE BEHAVIOUR

European Norm

EN 45545 : Hazard Level HL2 or HL3

Italy

UNI 8457 UNI 9174 UNI 9177:

classe 1 A

NF F 16-101: class F2

UNI E 10.02.997.3: livello LR4

Germany

DIN 5510-2 2009 SF3

France

NF P 92-501: class M2

NF F 16-101: class F2

Spain

UNE 23-727-90: class M2

UK

BS 6853 TABLE 1: category 1a / 1b

Far East - ISO 5658-2: tested

USA

NFPA 130: in compliance

ASTM E 648: CRF > 0,45 Watt/ cm²

ASTM E 662 Ds 90 < 100, Ds 4 < 200

BSS 7239 fuel gas analysis,

Boeing method: in compliance

with standards

UIC 564-2 annex 12: CLASS A

Directive 95/28/CE: in compliance

IMO

Directive 96/98/EC

Suitable to be used in naval equipments.

B-D forms.

HOMOGENEOUS CONSTRUCTION

Color, pattern and antibacterial properties throughout the entire thickness of the product.

RESISTANCE TO CIGARETTE BURNS

Resistant to cigarette burns (600-800° C) leaving no permanent marks in accordance with the **EN 1399 standard**.

CHEMICAL RESISTANCE

Can withstand all chemicals found in commonly used cleaning products. in accordance **EN 423 standard**.

WEAR RESISTANCE

Designed to suit high traffic areas:

- Abrasion resistance:

<160 mm³ (ISO 4649)

<550 mm³ (NF F31-812)

- EN 685 Classification: **Class up to 43**

HIGH DIMENSIONAL STABILITY

Mondo flooring is much more resistant (**N 434 : < 0,3 %.**) to the changes in temperature compared to many resilient floorings.

REDUCED JUNCTION

Mondo rubber floorings are produced mainly in 2 meter wide rolls, thus allowing a significant reduction of joints.

IMO COMPOUNDS

On request special compounds in accordance with the IMO rules (fire and smokes) can be produced.

SECURITY AND INNOVATION

On request we can produce R10 products. A special non-skid additive provides better foothold and superior grip.





FUNCTIONALITY

COMFORT UNDERFOOT

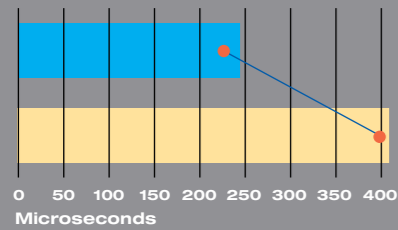
The anti-fatigue properties of rubber flooring are due to the unique elasticity of rubber: **rubber provides excellent cushioned comfort underfoot.**

EFFECTIVE

NOISE BARRIER

Compared to many other flooring products, Mondo resilient rubber flooring efficiently reduces the sound of foot traffic **(min. 5 dB - max. 18 dB)**. It also creates a barrier to the external noise of means of transport: engines, rails, points. **(ISO 140-8 and ISO 717-2).**

SHOCK ABSORPTION

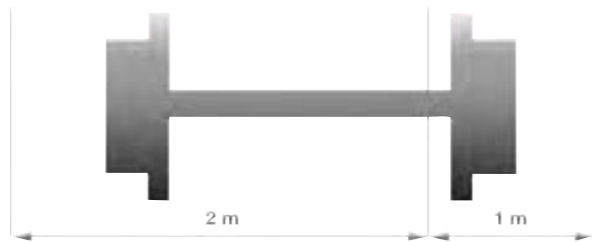


The shock absorption qualities of rubber flooring is evidently greater than hard surfaces.

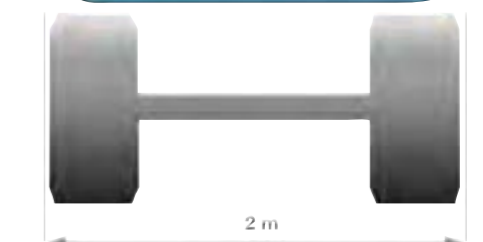
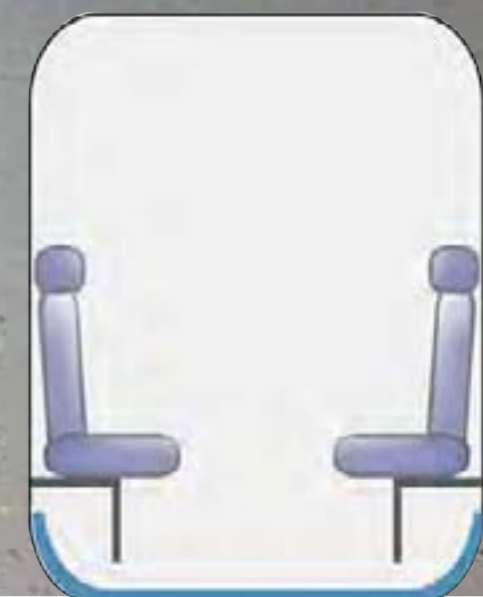
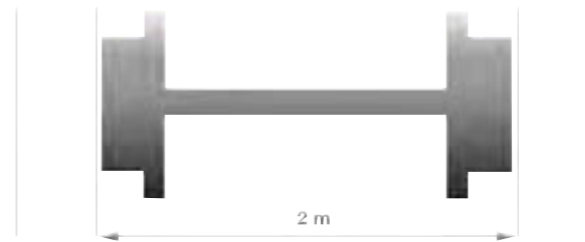
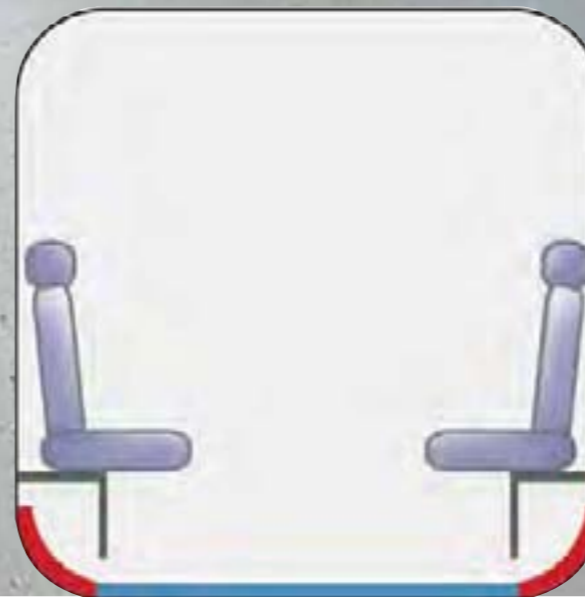


EXCLUSIVE 2 METERS WIDE ROLL

SIGNIFICANT REDUCTION OF JOINTS
 Mondo produces 2 meters wide rubber flooring rolls, thus allowing a significant reduction of joints which, in some cases, are totally eliminated.
In this way, risks relative to the seepage from the surface to the substructure are highly reduced.



2 meters rolls allow to reduce by 50% the junction in a wide body cars flooring



2 meters rolls allow to install the full width of a narrow body cars flooring without any seams.



SPECIAL PMR LOGO

Special PMR logo made in one single piece; high visibility and long lasting life equal to the flooring. The size can be customised.

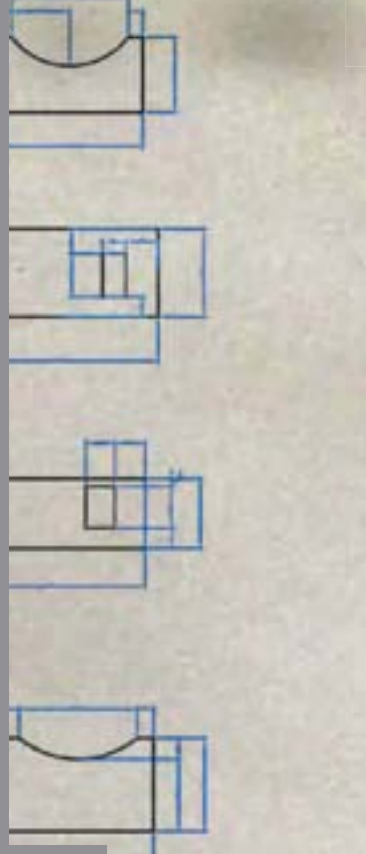
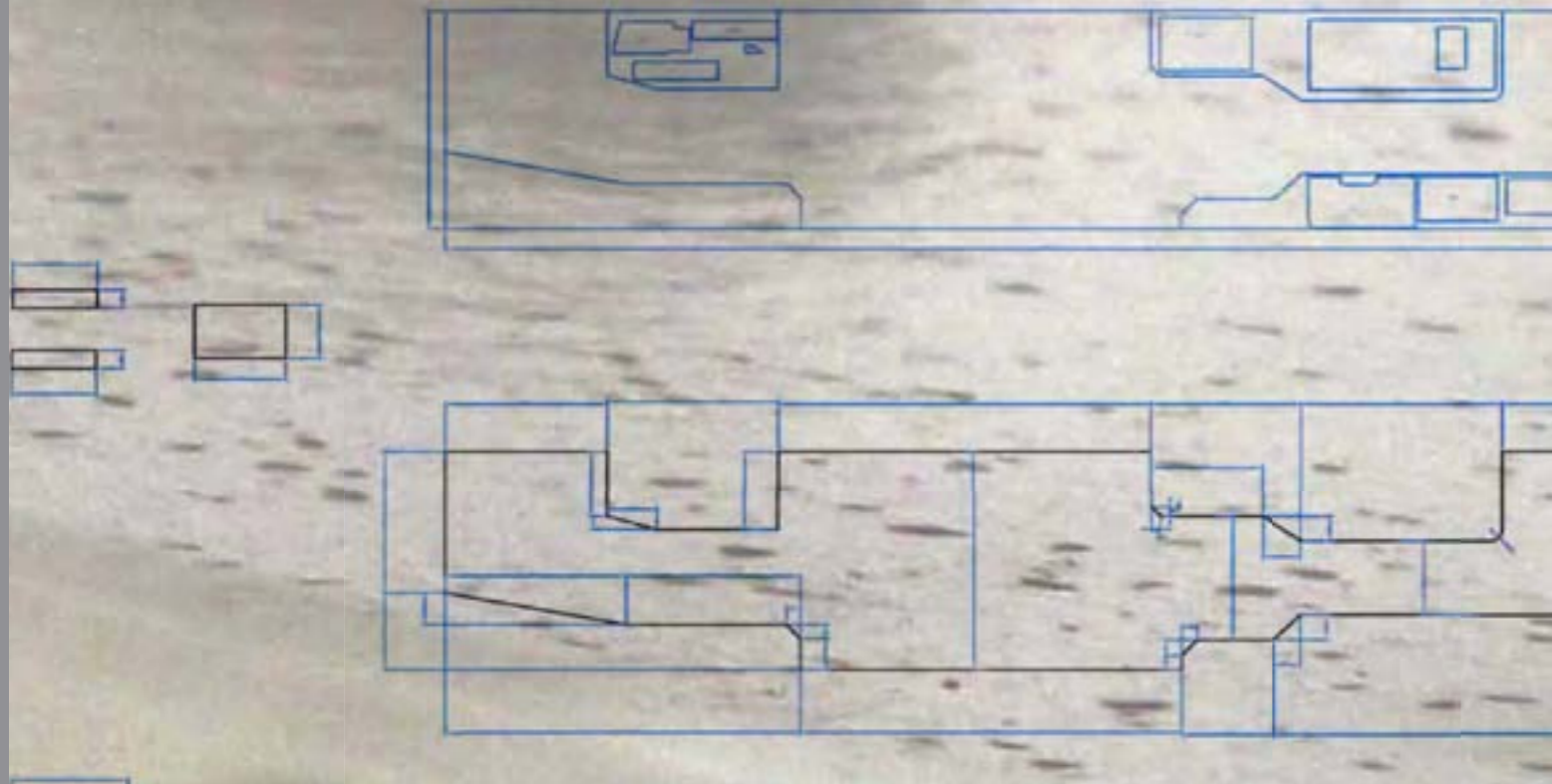


INLAID LOGOS



WATER-JET TECHNOLOGY
Applies neither pressure nor heat, so there is no distortion to the material. Assemble cut material with no fluctuation in the plane of the surface.

Aesthetics and durable.



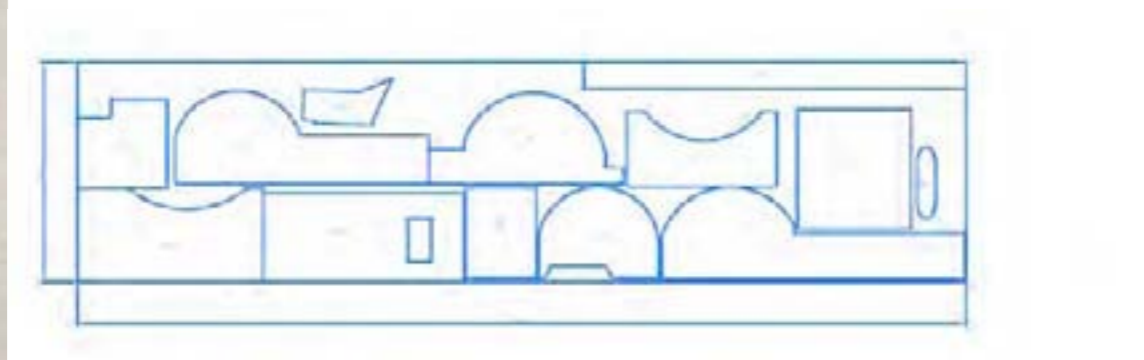
EASY INSTALLATION KIT
Mondo, besides offering a large range of standard and custom-made products for buses and rail-cars, can as well supply the floor already cut to the right size.

Surfaces are cut using **water jet cutting technology**. This process is highly precise and allows us to offer a perfect fit between each piece.

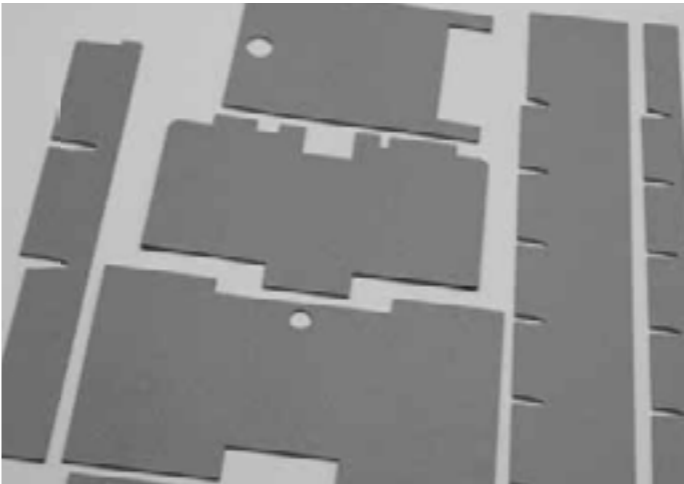
Water jet cutting process allows us to offer custom sized kits according to the engineering plans.

Every kit contains the complete set of cut to measure flooring to be **directly installed** in every car.

This enables the builder to optimize the assembly costs by reducing the time of installation.



SPECIAL SOLUTION





Mondo Idea!

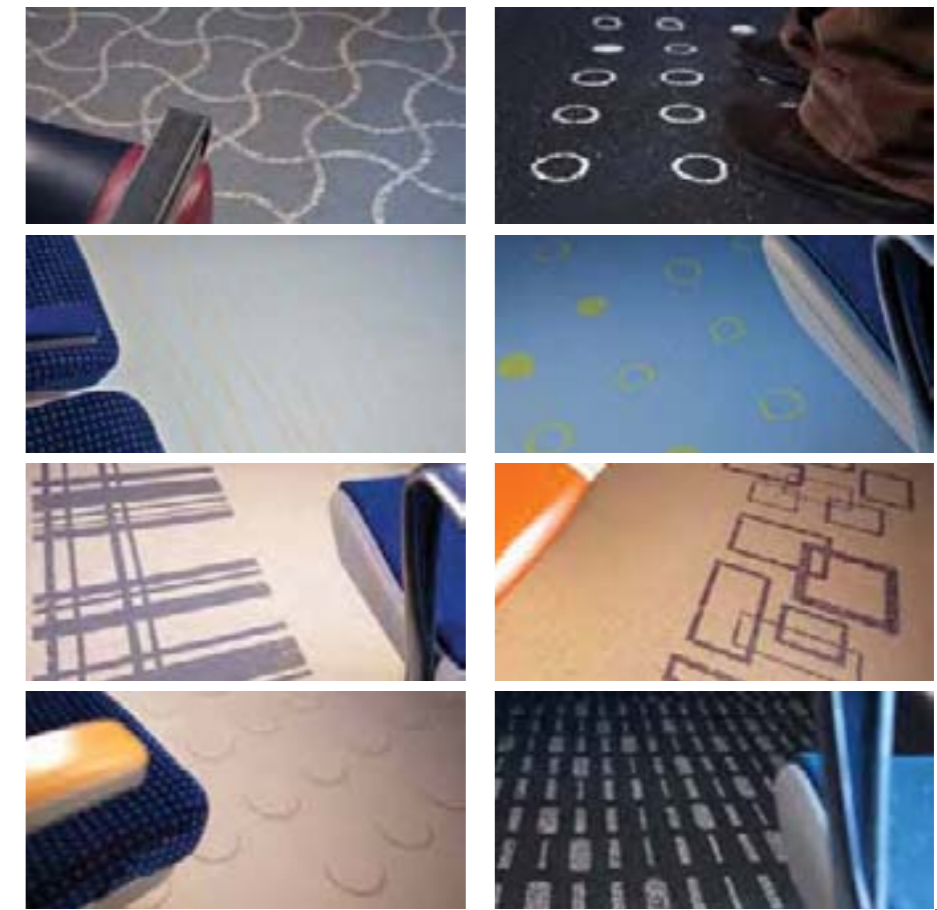
Mondo Idea! can transform a treading surface into an integral part of a vehicle's interior design, allowing for a level of personalization not yet seen in the transport sector.

The designs are conceived to be placed in the most visible part of the vehicle; the corridor. The flexibility of the Mondo Idea! system always allows for the design to be correctly centred, independently from the vehicle in which the flooring is to be placed.

Mondo Idea! is not only a range of products but also the starting point in terms of advanced customized shapes. Responding to important demands, technology developed by Mondo allows for a level of personalization up until now unknown in the high-performance flooring sector. This is a real opportunity for the designer's imagination to run free.

A new manufacturing process for creative rubber flooring

Up to now, in terms of personalization, the possibilities were limited to a variation of color, size or density of the chips that compose the image. The technology used so far has turned out to be strict in its concept; it has been utilized by all the players in the market and it has caused a sort of monotony in the offer. The technology which has conceived the Mondo Idea! project can be used to obtain a personalization which goes beyond the current range.



what is your
Idea ?

Grain



3,0 mm



1,90 x 10 m



61 x 61 cm



4,80 kg/m²

For special solutions please refer to the catalogues



G2912



G3691

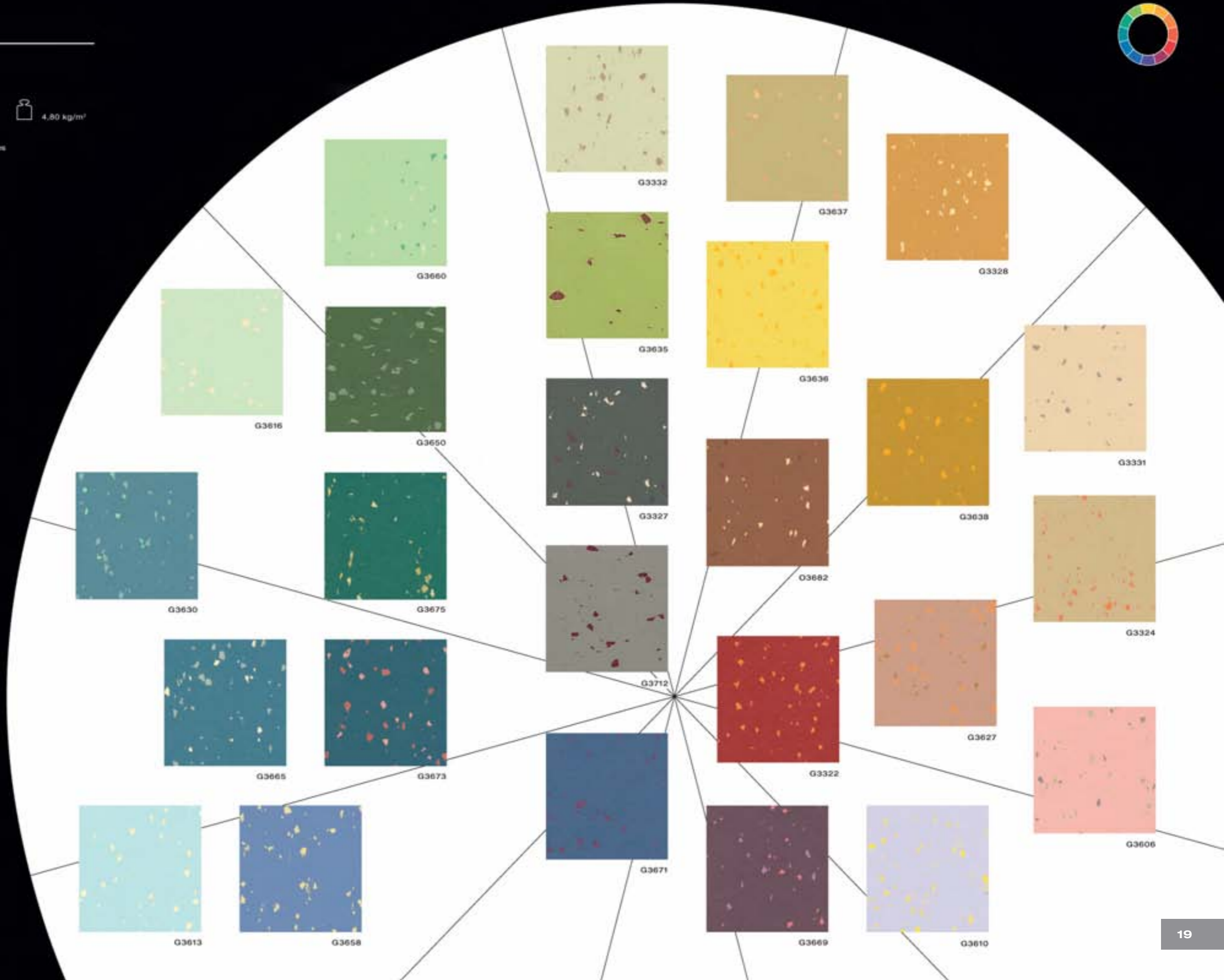


G2914



G2915

Neutral



One



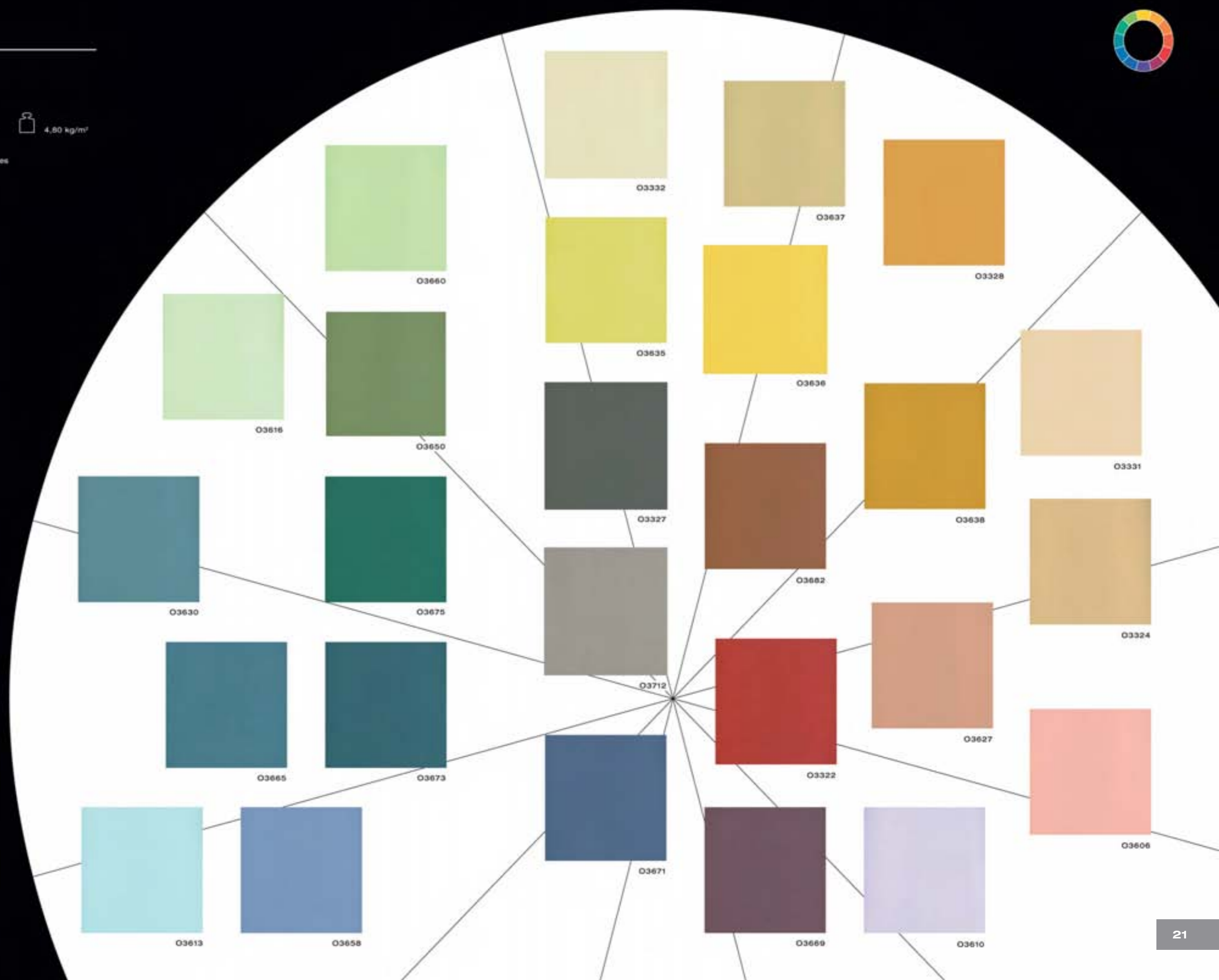
3,0 mm

1,90 x 10 m 61 x 61 cm 4,80 kg/m²

For special solutions please refer to the catalogues



Neutral



O3332

O3637

O3328

O3660

O3635

O3636

O3331

O3616

O3650

O3327

O3638

O3324

O3630

O3675

O3712

O3682

O3627

O3691

O2914

O3665

O3673

O3671

O3322

O3608

O2915

O3613

O3658

O3669

O3610



Punti

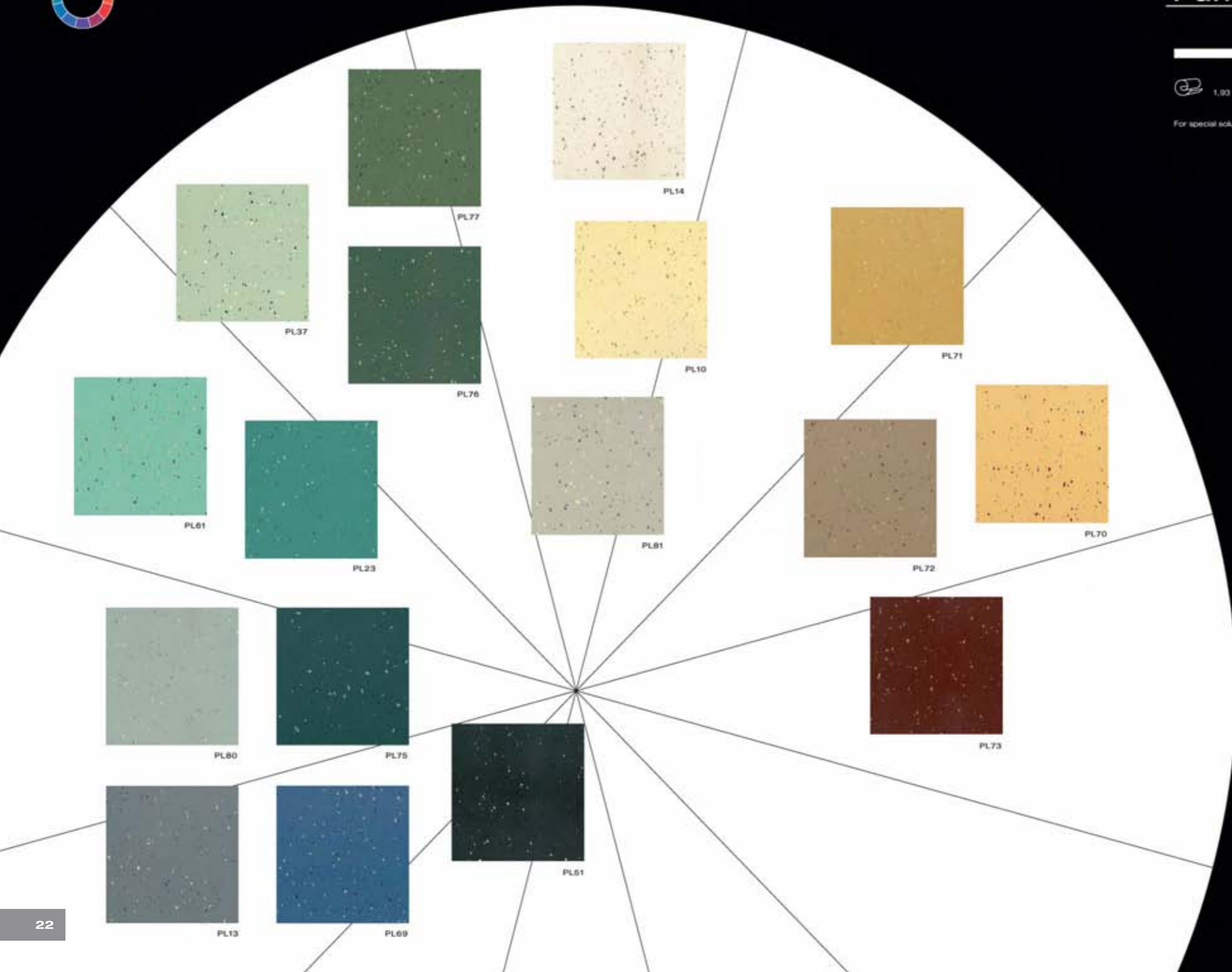
2.0 mm

1,93 x 14 m

61 x 61 cm

3,20 kg/m²

For special solutions please refer to the catalogues



PL34

PL33

PL74

Neutral



Futura

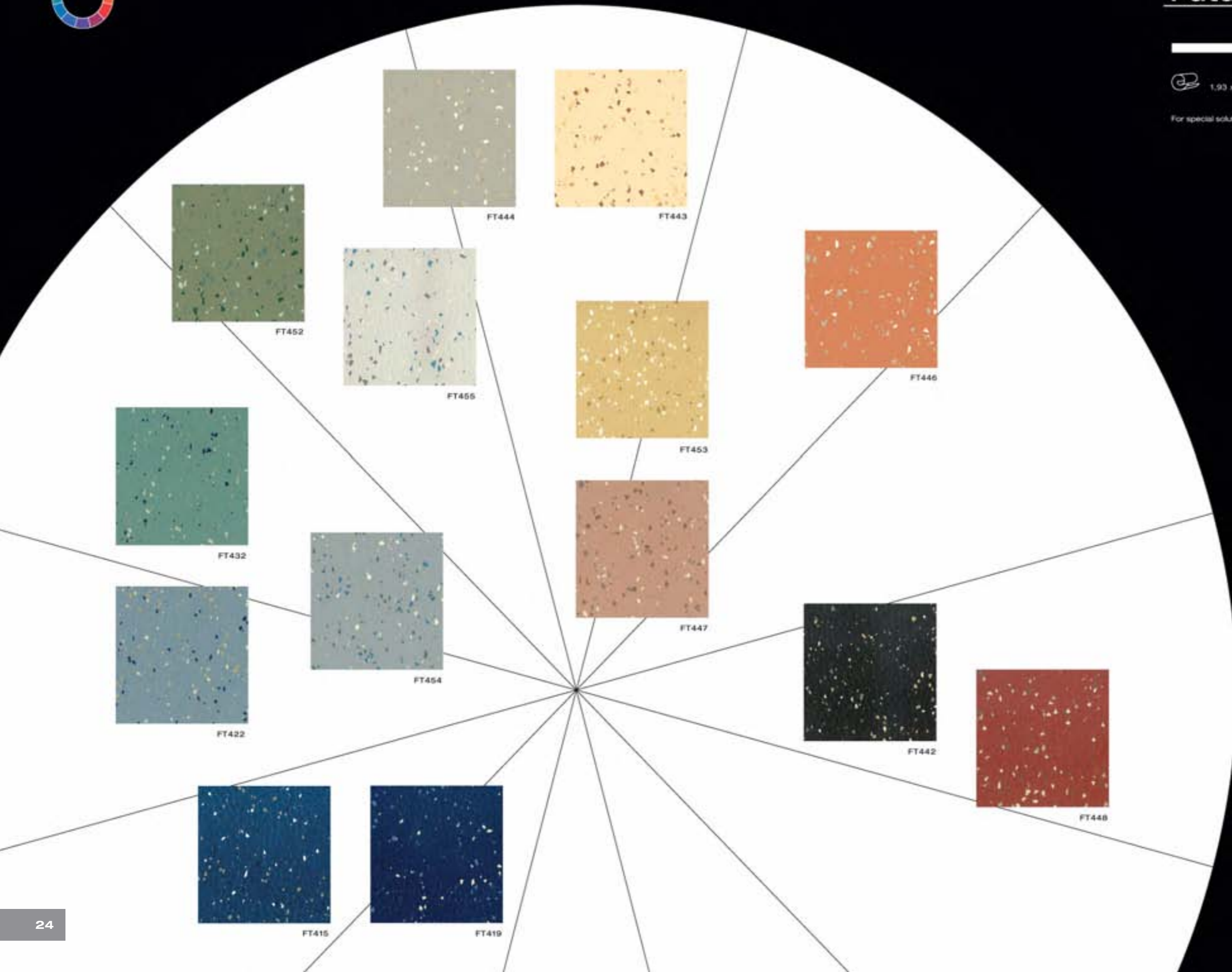
2,0 mm

1,93 x 14 m

61 x 61 cm

3,20 kg/m²

For special solutions please refer to the catalogues



FT451

FT417

Neutral

Bollo Extra



2,5 mm / 4 mm*



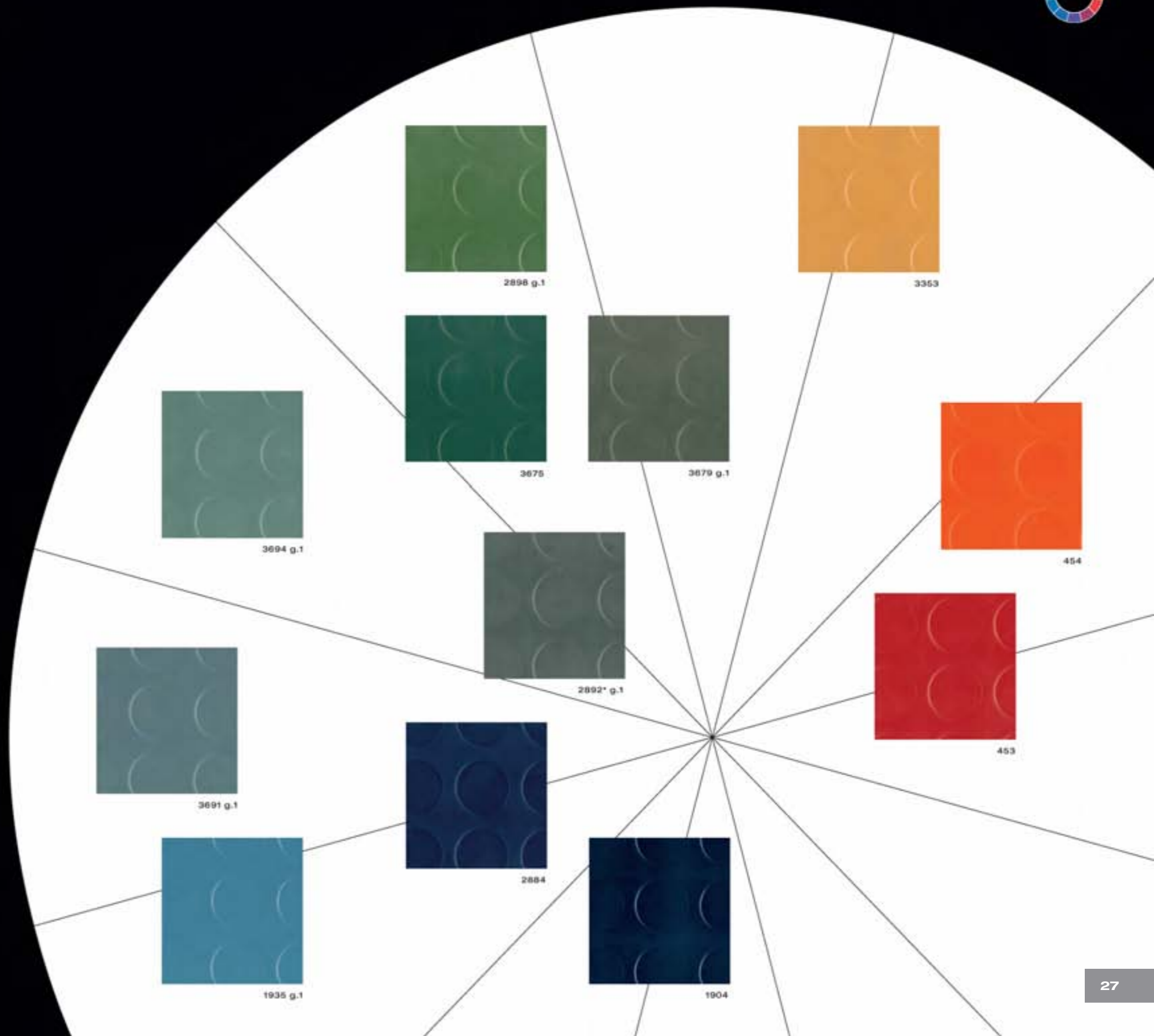
1,20 x 12 m



50 x 50 / 100 x 100 cm



3,45 kg/m²



Neutral

2894 g.1	2893* g.1
2891* g.1	208*

One

Properties	Test methods	Unit of measure	Requirements	Average values
Hardness	ISO 7619	Shore A	≥ 75	90
Residual indentation	EN 433	mm	≤ 0,2	0,07
Abrasion resistance	ISO 4649 met. A - 5 N	mm ³	≤ 250	170
Colour fastness to artificial light	ISO 105-B02 met. 3	degree	blue scale ≥ 6 grey scale ≥ 3	≥ 6
Fire classification * with or without adhesive	EN 13501-1	class	-	CLASS B _s - s1*
Dynamic coefficient of friction	EN 13893	-	≥ 0,3	in conformity (DS)
Improvement in footfall sound absorption	ISO 140/8 ISO 717/2	dB	-	9
Static electrical propensity	EN 1815	kV	< 2 (antistatic)	in conformity

Grain

Properties	Test methods	Unit of measure	Requirements	Average values
Hardness	ISO 7619	Shore A	≥ 75	90
Residual indentation	EN 433	mm	≤ 0,2	0,07
Abrasion resistance	ISO 4649 met. A - 5 N	mm ³	≤ 250	170
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Improvement in footfall sound absorption	ISO 140/8 ISO 717/2	dB	-	9
Static electrical propensity	EN 1815	kV	< 2 (antistatic)	in conformity

Punti

Properties	Test methods	Unit of measure	Requirements	Average values
Hardness	ISO 7619	Shore A	≥ 75	90
Residual indentation	EN 433	mm	≤ 0,15	0,05
Abrasion resistance	ISO 4649 met. A - 5 N	mm ³	≤ 250	160
Colour fastness to artificial light	ISO 105-B02 met. 3	degree	blue scale ≥ 6 grey scale ≥ 3	≥ 6
Fire classification * with or without adhesive	EN 13501-1	class	-	CLASS B _s - s1*
Dynamic coefficient of friction	EN 13893	-	≥ 0,3	in conformity (DS)
Improvement in footfall sound absorption	ISO 140/8 ISO 717/2	dB	-	6
Static electrical propensity	EN 1815	kV	< 2 (antistatic)	in conformity

Futura

Properties	Test methods	Unit of measure	Requirements	Average values
Hardness	ISO 7619	Shore A	≥ 75	90
Residual indentation	EN 433	mm	≤ 0,15	0,05
Abrasion resistance	ISO 4649 met. A - 5 N	mm ³	≤ 250	160
Colour fastness to artificial light	ISO 105-B02 met. 3	degree	blue scale ≥ 6 grey scale ≥ 3	≥ 6
Fire classification * with or without adhesive	EN 13501-1	class	-	CLASS B _s - s1*
Dynamic coefficient of friction	EN 13893	-	≥ 0,3	in conformity (DS)
Improvement in footfall sound absorption	ISO 140/8 ISO 717/2	dB	-	6
Static electrical propensity	EN 1815	kV	< 2 (antistatic)	in conformity

Bollo Extra

Properties	Test methods	Unit of measure	Requirements	Average values
Hardness	ISO 7619	Shore A	≥ 75	90
Residual indentation	EN 433	mm	≤ 0,2 (Extra 2,5 mm) ≤ 0,25 (3,5 mm / 4 mm)	0,08 (Extra 2,5 mm) 0,15 (Extra 4 mm)
Abrasion resistance	ISO 4649 met. A - 5 N	mm ³	≤ 250	150
Colour fastness to artificial light	ISO 105-B02 met. 3	degree	blue scale ≥ 6 grey scale ≥ 3	≥ 6
Fire classification * with or without adhesive	EN 13501-1	class	-	CLASS B _s - s1 *
Dynamic coefficient of friction	EN 13893	-	≥ 0,3	in conformity (DS)
Improvement in footfall sound absorption	ISO 140/8 ISO 717/2	dB	-	8 (Extra 2,5 mm) 14 (Extra 4 mm)
Static electrical propensity	EN 1815	kV	< 2 (antistatic)	in conformity



3691



454

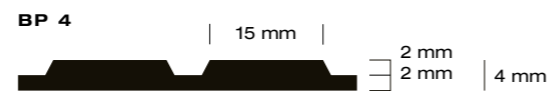
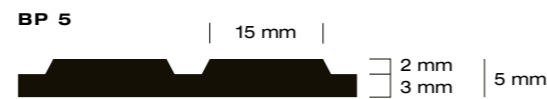
BOLLO EXTRA ROLLS

Classic studded product produced in rolls.
Suitable for corridors, platforms and suggested any time roll goods are preferred.



BP

Suitable to high traffic.
Extensively used on means of transports (urban busses, trains, trams and metro).



206 GREY



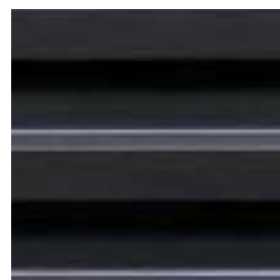
208 BLACK

SM

Heavy traffic product for corridors, ramps, stairs.
Used mainly on means of transport (trams and metro).



206 GREY



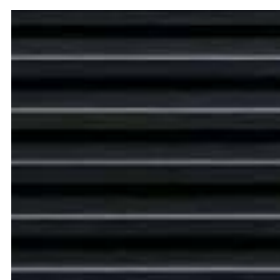
208 BLACK

SF

Medium and high traffic product for industrial use or means of transport.



206 GREY



208 BLACK

WELDING ROD MONDO WR



Products and tools needed.



1 Grind joints to a depth of around 1.5 mm according to the thickness of the product



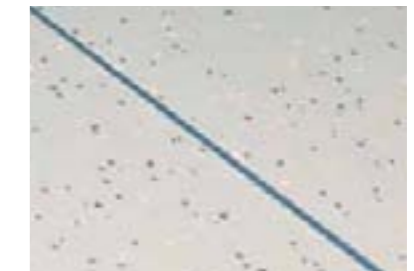
2 Weld with the specific welding tool, setting a temperature of approximately 500°C.



3 Perform the first run using a 1/4 crescent - shaped knife with guide.



4 Cut flush with the floor using only the 1/4 crescent - shaped knife.



5 Final result.

SEALING PASTE

ELASTJOINT



1 Grind joints to a depth of around 1.5 mm according to the thickness of the product

H&C EPOXID



2 Protect the edges of the ground part with paper tape, leaving only the grinded track uncovered.



3 Put the spout on the joint, then insert the paste.



4 Spread the sealing paste with a spatula in both directions in order to make it penetrate uniformly.



5 Final result.

REFERENCES

AUSTRALIA

MELBOURNE XTRAPOLIS

AUSTRIA

INNSBRUCK
LINZ - GRAZ
REGIONAL TRAIN WBL
TALENT OBB
DOSTO WESTBAHN

BELARUS

MINSK

BELGIUM

M6
PROJET V839
PROJET I10
PROJET M66
DESIRO ML FOR SNCB
STIB BRUXELLES

BRAZIL

CPTM
METRO SAN PAOLO

CECK REPUBLIC

CECK RAILWAYS

CHILE

PROJ. 0741 (REFURBISHING)

CHINA

SHANGHAI METRO
BEIJING METRO LINE 4
BEIJING METRO
SHANGHAI METRO LINE 6-8
SHENYANG METRO LINE 1
CRH5
NANJING METRO LINE 1
NANJING METRO LINE 2 EXT.
TRAM SHANGHAI
EMU CHINA
YANG PU

DENMARK

COPENAGHEN
DSB

EGYPT

EGYPTIAN RAILWAY

FINLAND

VR - SM3 PENDOLINO
VR - SM4 TRAINS
HELSINKI L-4159 FLIRT

FRANCE

VAL ROISSY
TER 2N/2N-NG - SNCF
TGV DUPLEX DAYSIE
TGV DUPLEX SNCF
RGV
SNCF
AGC - SNCF
TER 2N/2N-NG - SNCF
NAT - SNCF
MI 79 - SNCF/RATP (REFURBISHING)
Z2N5
LYON (REFURBISHING)
LOCOS ALSTOM
CORAIL (REFURBISHING)
PARIS-CHARTRES-LE MANS
RIO

FRANCE

TER RHONES ALPES
TGV LACROIX SNCF
TGV SNCF
THALYS
TRANSILIEN SNCF (REFURBISHING)
VO2N
Z2N
MARSEILLE
FRANCE L-4190

GERMANY

AUGSBURG
BREMEN
DORTMUND
PROJ. "VT 612"
S-BAHN BERLIN BR482
TALENT
TALENT 2 EMU - DB
PROJ. "ET" 424-426
DEUTSCHE BAHN
TRAMBahn MUENCHEN
DB CARGO LOCOMOTIVE
FLIRT MAAS-RHEIN-LIPPE
VARIObAHN MÜNCHEN
KREFELD
VEOLIA FLIRT

GREAT BRITAIN

MANCHESTER

GREECE

ATTIKO METRO III
OSE RAILWAYS
ATTIKO METRO II (REFURBISHING)

HOLLAND

VIRM 4
SPRINTER LIGHT TRAIN

HOLLAND - BELGIUM

HSA - 250 V

HUNGARY

BUDAPEST
MAGYAR ÁLLAMVASUTAK
MAV - TALENT
METRO BUDAPEST

INDIA

MUMBAI METRO
METRO DEHLI
DMRC RS3 EMU
METRO BANGALORE

IRAN

RAJA SINGLE DECK
RAJA DOUBLE DECK

ITALY

VAL TORINO
VAL TURIN
TRAM VENISE
TRAM LATINA
NUOVO TRASPORTO VIAGGIATORI
NTV - NUOVO TRASPORTO VIAGGIATORI
GTW
NEW PENDOLINO
TORINO
TRENITALIA - MINUETTO

ITALY

SIRIO FIRENZE
SIRIO MILANO
SIRIO SASSARI
NEW METRO MILANO
TRENITALIA - T.A.F.
ATM - MILANO
ROMA
TRENITALIA - ETR 500
GENOVA
TRENITALIA RAILWAYS -MD
FERROVIE DEL SUD
MOLTENO L-4210
METRO ROMA
GARGANO FLIRT
TILO

JAPAN

AC TRAIN
HANZOOMON LINE
HIBIYA LINE A - B - C - D
JAPAN RAILWAY EAST
JAPAN RAILWAY KYUSYU
MARUNOCHI LINE 1 - 2 - 3
METRO TOKYO ASAKUSA LINE
METRO TOKYO MITA LINE
METRO TOKYO SHINJUKU LINE
NANBOKU LINE
SEIBU 10499
SEIBU METRO
NEX (NIGATA EXPRESS)
TAIWAN SHINKANSEN
TOBU LINE
TOKYO METRO NO.13 LINE
TOKYO METRO TOZAI LINE
TOYAMA LRT
TOYO KOSOKU
TOZAI LINE
TSUKUBA LINE
YURIKAMOME

KOREA

INCHEON METRO
KNR 1
KNR 2
KNR 3

MALAYSIA

KUALA LUMPUR

MEXICO

MEXICO CITY

MOROCCO

ONCF EMU

NORWAY

TALENT
NSB L-4192

OMAN

KHOSHILAT MAQANDELI CAVE

PHILIPPINES

S.I.G. RAILWAYS
PHILIPPINES DMU

POLAND

LODZ
PKP

PORTUGAL

PORTO
ALFA PENDULAR
SILICIO SANTO DOMINGO
OPRET

SINGAPORE

METRO
CIRCLE LINE
NEL

SLOVENKA

SLOVENSKE ZELEZNICE

SPAIN

VALENCIA-ALICANTE
"3000" MADRID
MADRID
CITADIS BARCELONA
MADRID - M.L.M.
METRO BARCELONA
"6000" MADRID
"8000" MADRID
ZARAGOZZA
MALLORCA
RENFE
RENFE TRENO REGIONAL
TRENO MODULAR - CIVIA II° - III°

SWEDEN

STOCKOLM
ITINO
STOCCOLMA

SWITZERLAND

INOVA SBB
NEW CISALPINO
PROJ. FLIRT
GENEVE
DOUBLE DECK SBB

TAIWAN

KMRT KAOHSIUNG
TAIWAN SHINKANSEN
TILTING TRAIN

TUNISIE

TUNISIA EMU
SNCFT ROLLING STOCK

TURKEY

ISTANBUL
ANKARA
TCDD
MARMARAY

UK

MANCHESTER
MANCHESTER
FIRST CAPITAL CONNECT
FIRST GREAT WESTERN
WABTEC
WABTEC / RAILCARE REFURBISHMENTS

UK - FRANCE

EUROTUNNEL

USA

NYCTA - NEW YORK
NEW JERSEY
MBTA - BOSTON
MTA - LOS ANGELES
SAN FRANCISCO
GTW CMTA AUSTIN - TEXAS

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