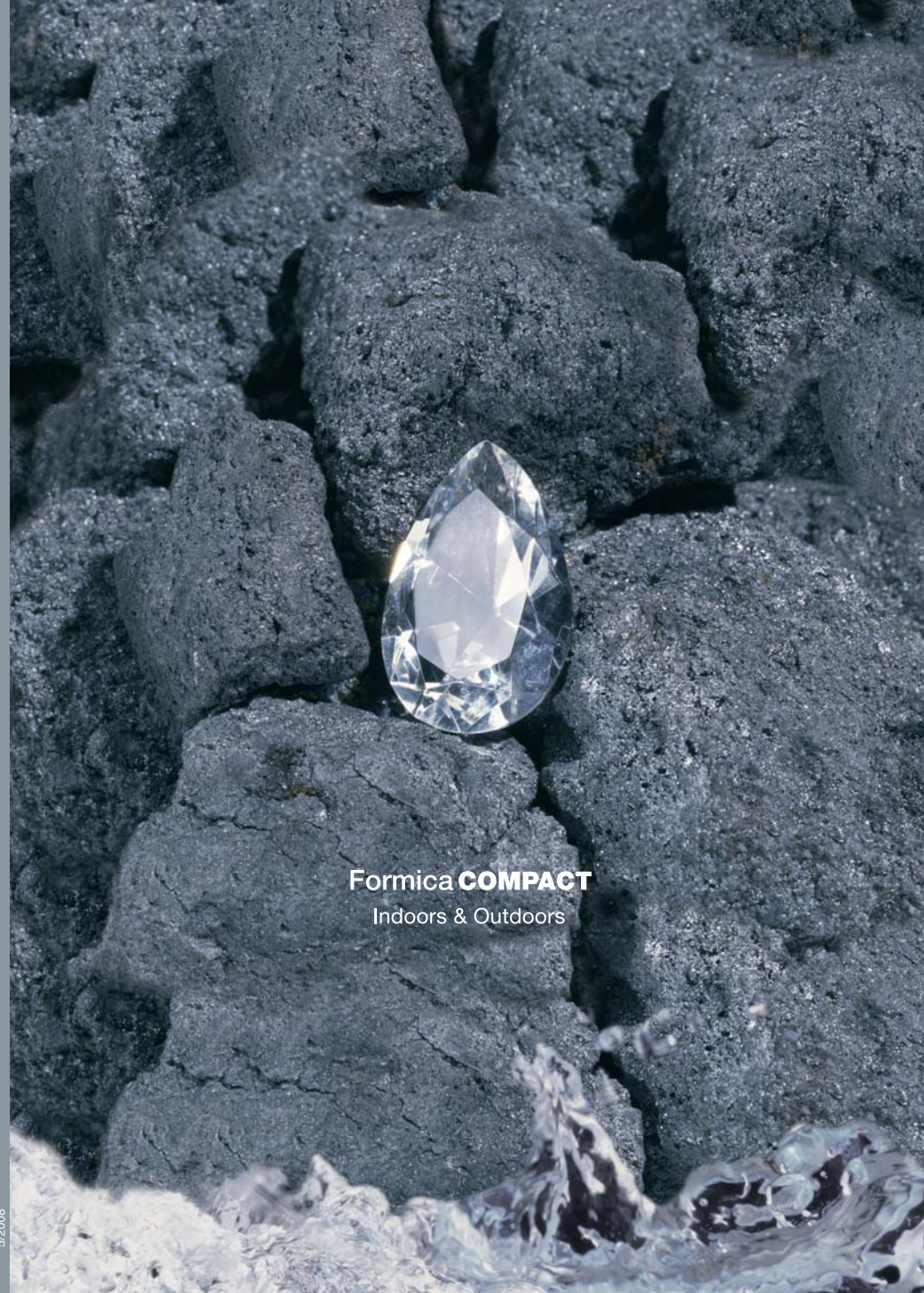
Formica® **COMPACT**

www.formica.com

5/2008



Formica® **COMPACT**

Many of the things that
seem to be luxuries today
will become the norm
in the near future

Walter Gropius
Founding Architect of the Bauhaus
(Berlin 1883 - Boston 1969)

Private residence. Veddinge Bakker. Denmark. Architect : Mads Lützen.

a rough diamond

Like a diamond
– the hardest of all
substances in nature –
Formica **COMPACT**,
structural panel is
strong and desirable.

Its special properties make it an unchangeable material for use in all types of façades, buildings and architectural masses. A diamond in the rough with fire- and water-resistant properties that can withstand the elements as well as hard use and impacts, remaining unaffected over time, in compliance with European Standard EN-438-6.

An ecological material that meets the highest standards of environmental respect. An inert material that can be used as an energy resource through thermal recycling given that it does not contain heavy metals or halogens. An energy efficient material suitable for buildings, useable as a ventilated façade, blocking heat loss in winter and heat transmission in summer. A material tested and endorsed by the Eduardo Torroja Institute through Technical Suitability Document (Dit Plus no. 491).

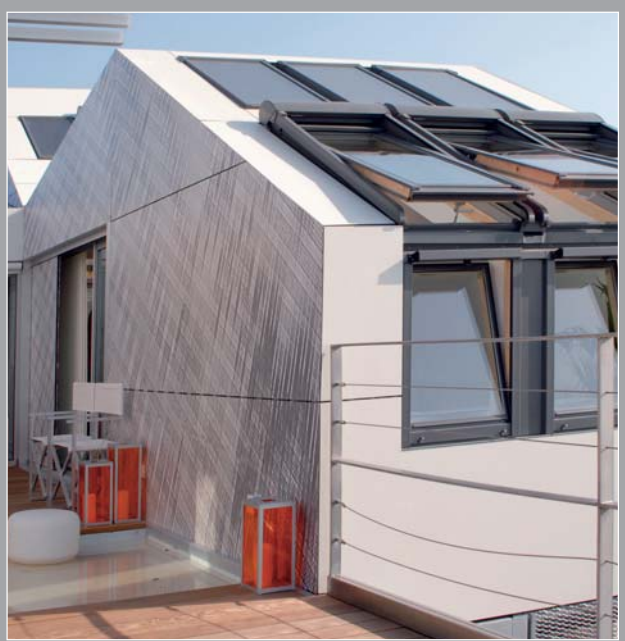
Next, we present seven outstanding projects as well as 112 other photographs of various applications. Architectural examples created with ingenuity and achieved using Formica **COMPACT**, exterior panel.

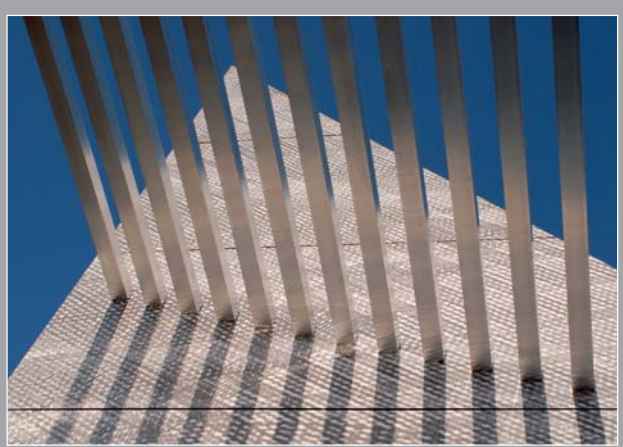
Exteriorize your ideas with
Formica **COMPACT**

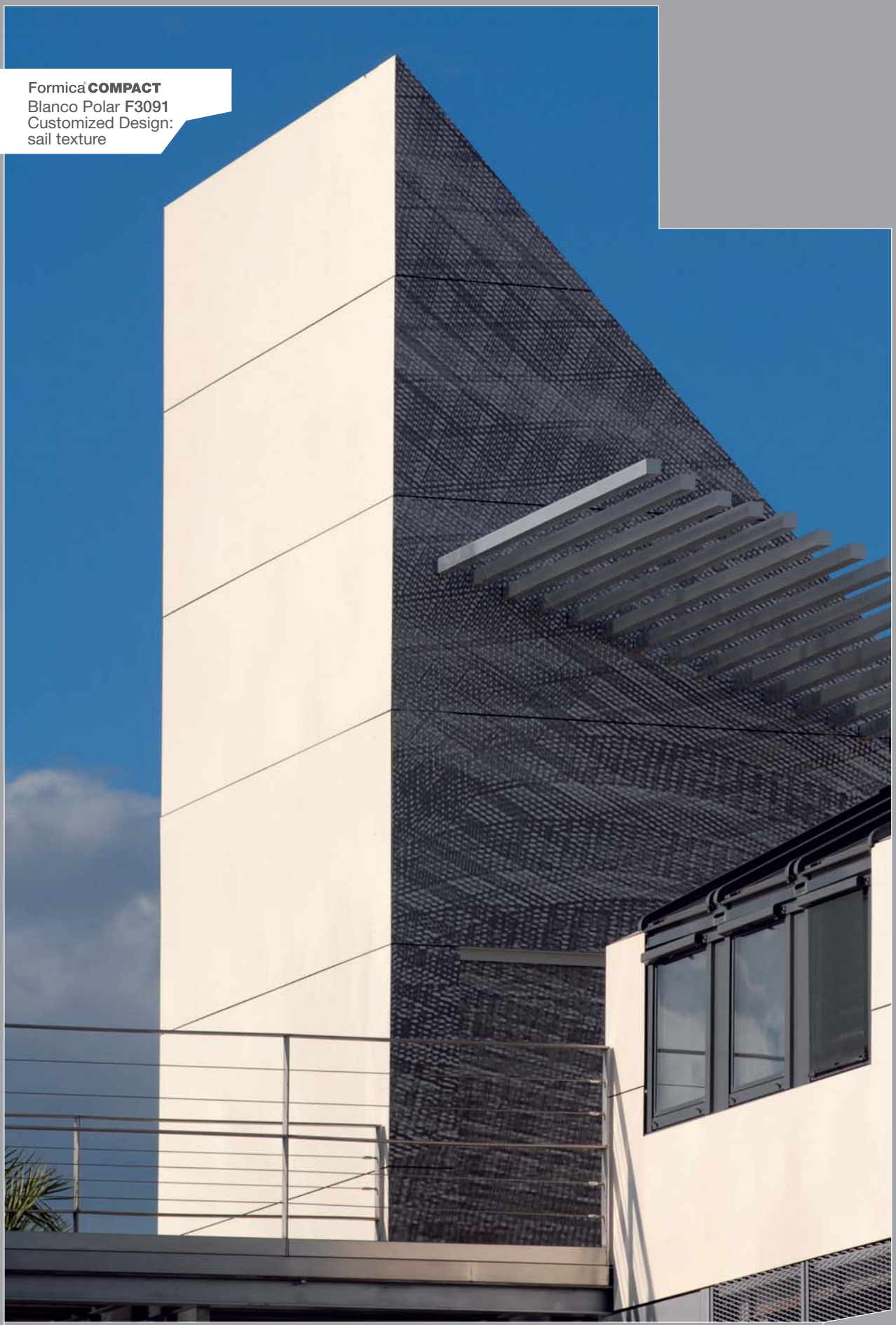
Nº DIT 491

0.1

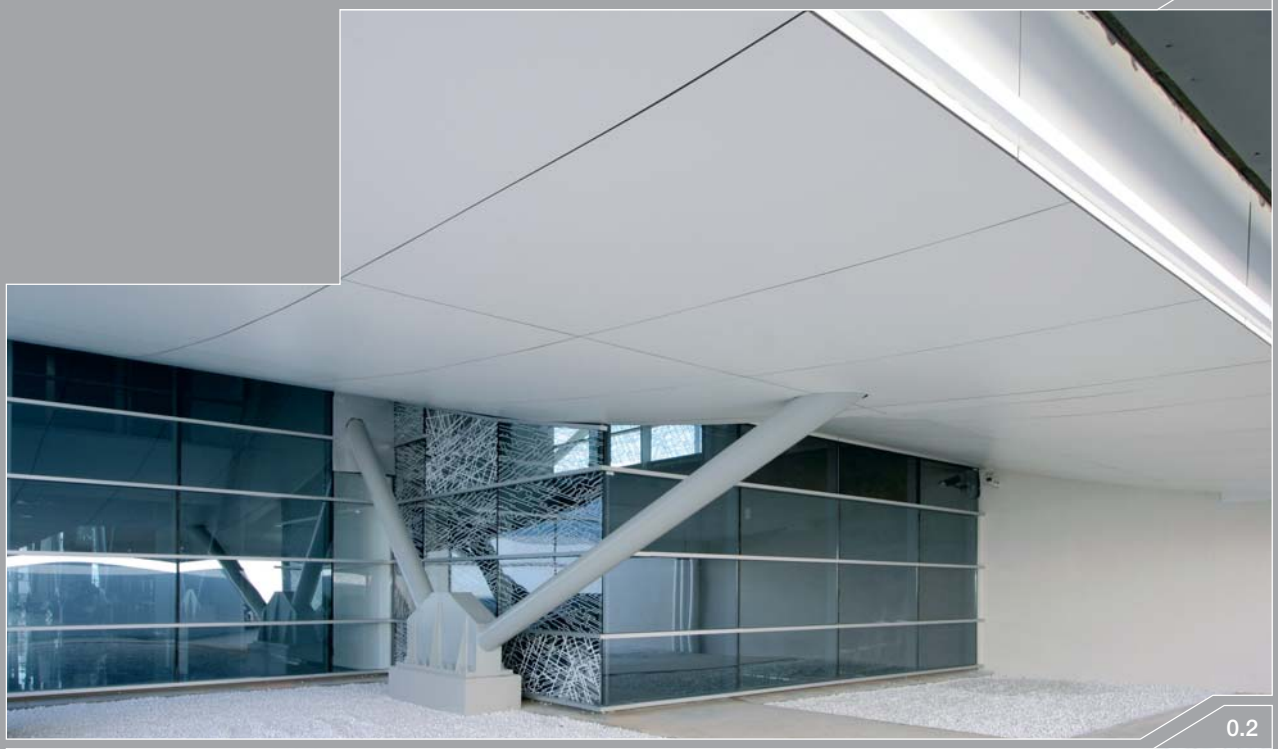
0.1







0.1 Bioclimatic Residence Atika-Velux Getxo. Spain Architect: Javier Aja (AcxT-Idom)



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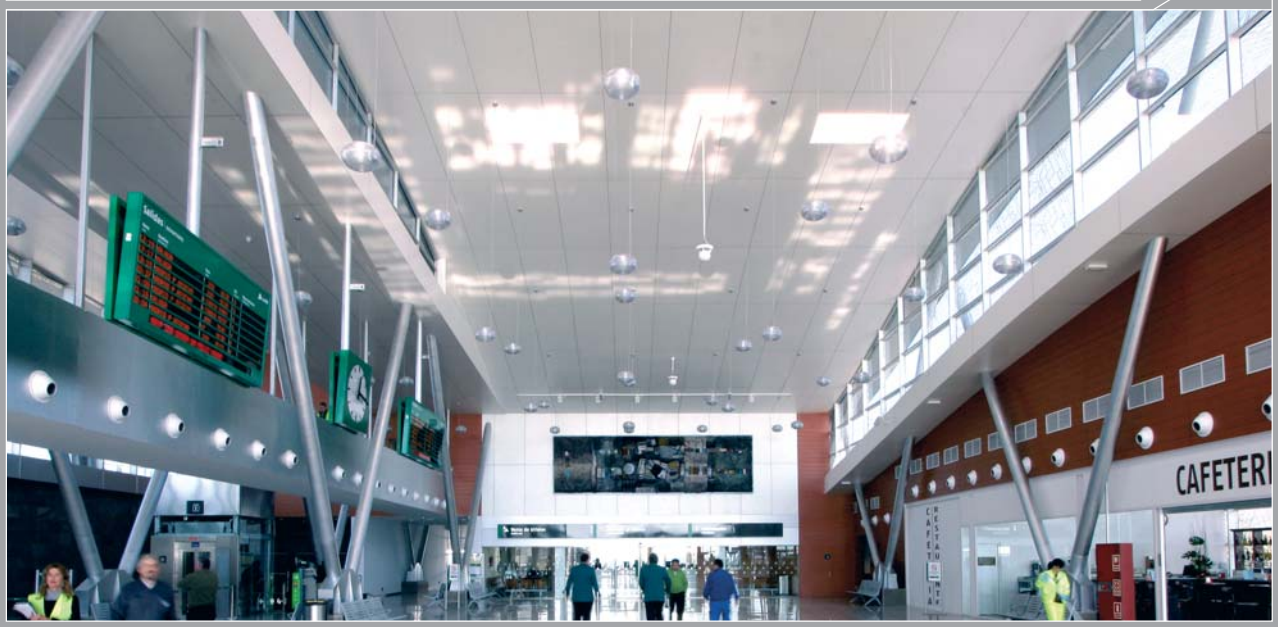

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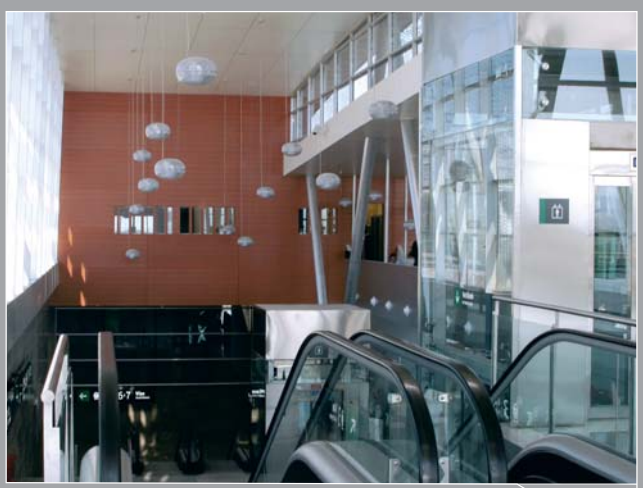


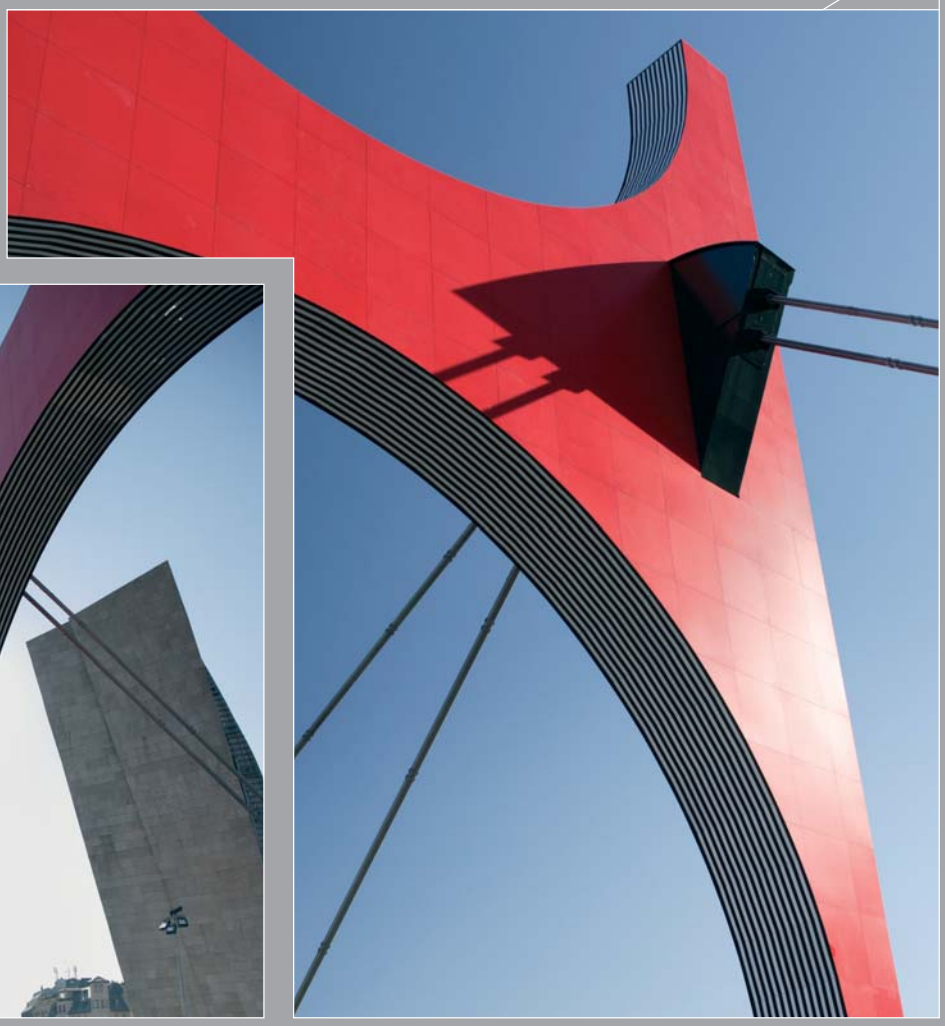
0.2

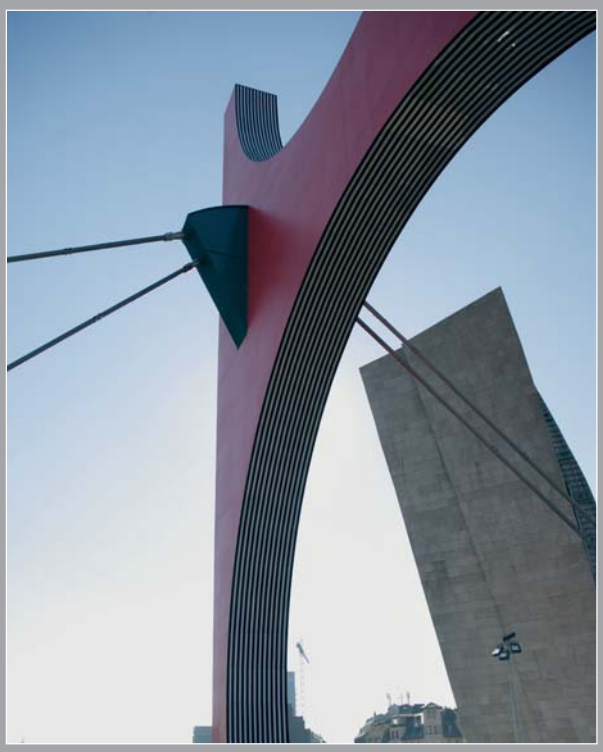
0.2

Formica® **COMPACT**
Blanco Polar **F3091**
Fantasy Brown
F0163

0.2 Santa Ana Railway Station. Antequera. Spain. Engineering: TIFSA - INECO

0.3



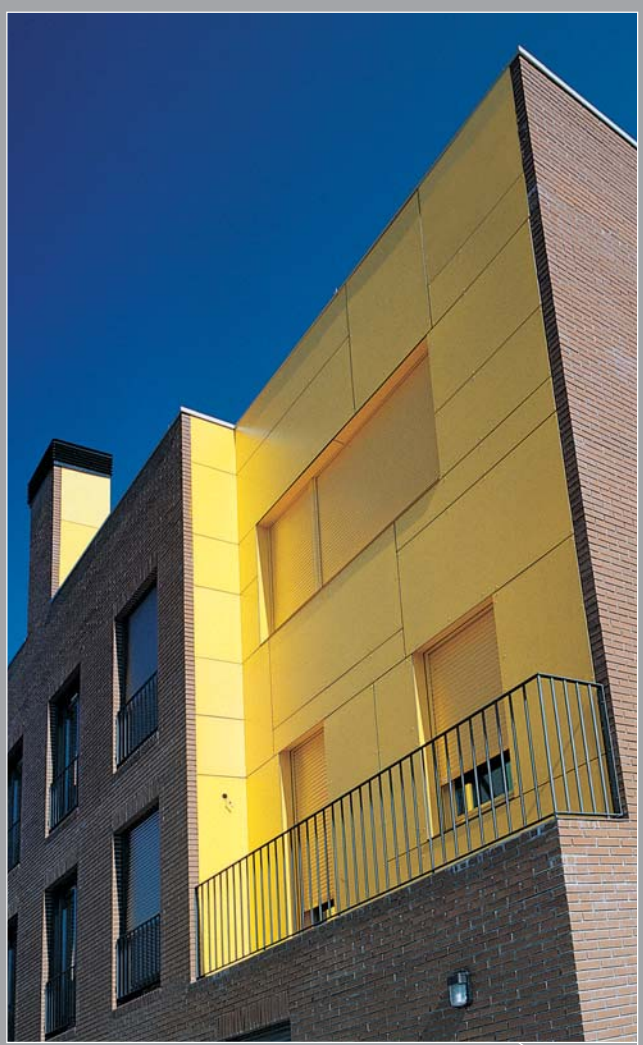


0.3

Formica® **COMPACT**
Spectrum Red **F7845**

0.3 “Red arches” Bilbao Artist: Daniel Buren Promoter: Bilbao Guggenheim Museum

0.4



0.4

0.4 Private housing Sopelana. Spain Architect: Iñigo Piñera

0.5


téria


CAFETERIA " CRESCENDO "
BANQUE POPULAIRE ATLANTIQUE
MAG PRESSE
BAR " LA GOELETTE "
PHARMACIE
COIFFEUR " Frank PROVOST "
TEL AND COM
LECLERC VOYAGE
CORDONNERIE " BLEU MINUTE "
PRESSING " LA LAVANDIERE "
SAV ET INFORMATIQUE
Entrée parking couvert

0.5

0.5

0.5 Leclerc Shopping Centre Nantes. France Architect: Michel Lameynardie

0.6

0.6

0.6

Formica® **COMPACT**
Blanco Polar **F3091**
Pale Gold **F7882**
Vibrant Green **F6901**
Basil **K1202**
Fog **F7961**
Sun **F4155**

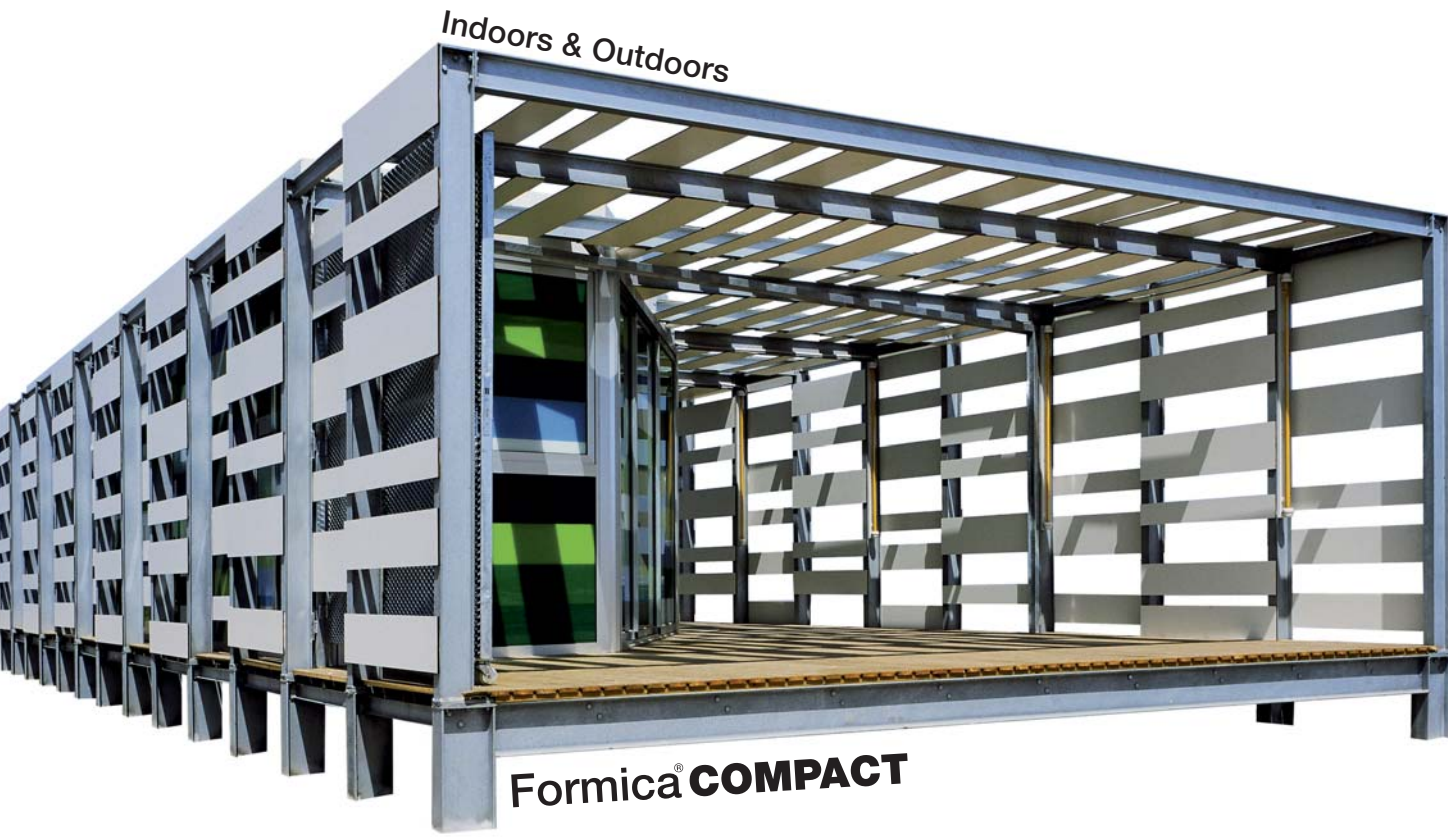
0.6 High School Canary Islands. Spain Architects: Juan Antonio González, Félix Perera and Urbano Yanes (GYP Architecture)

0.7

0.7

0.7

0.7 Unbe Nursing home. Bilbao Architect: Emilio Puertas


Indoors & Outdoors
Formica® COMPACT

Brilliant applications

Formica **COMPACT**.
Vertical and horizontal solutions; interior and exterior applications; flat and moulded pieces, personalized creations that can be perforated, bent and engraved.

Outdoors
Formica® **COMPACT**
Façades

Housing. Kopparstaven. Sweden. Architecture: WSP Arkitektur.

Housing. Granollers.
Architect: Josep Sánchez Ferrer.

Housing. Mollerusa. Spain.
Architect: Antonio Guillamón (Guillamón Cobos Architects).

Residence. VilaSeca-Salou. Tarragona
Architect: Antonio Batllé (B. Architecture).

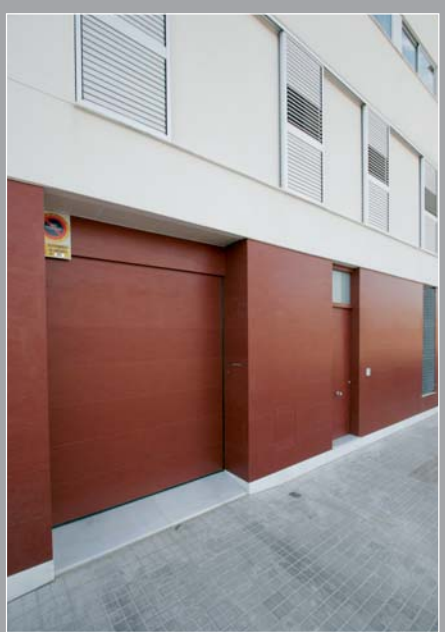
Day-care centre. Barcelona. Architects: Josep Palau and Elena Galera.

Private Residence. Veddinge Baker. Denmark. Architect: Mads Lützen.

Private housing. Brisbane. Australia. Architect: Bligh Soller Nield.

Cant Mont-Cad Restaurant. Barcelona. Design: Angel Codina.

Swiss Private School. Madrid.
Architect: Santafé & De Juan.



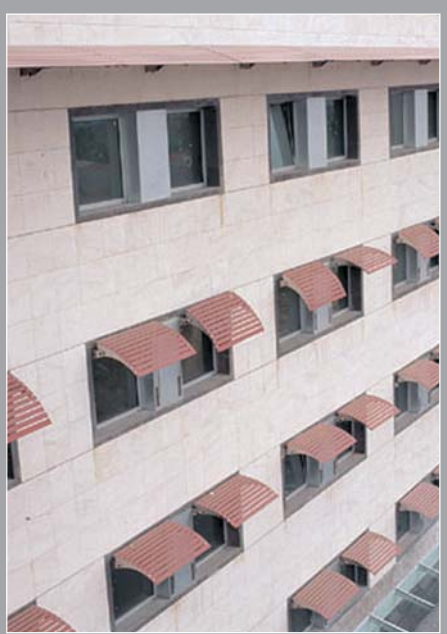
Private housing. Meliana. Valencia.

Lanchid Investment. Madrid.
Architect: Martín Olascoaga

Housing. Carranza. Vizcaya.
Architect: Germán Hurtado (Estudio Arq. Edos).

Pavilion. Holland. Architecture: Versnel & Partners Architecten.

Pérez de Ayala School. Madrid.
Architect: Hortaleza Council Architect Team



Housing. Sunshades. Canary Islands. Spain.

Celulosas Vascas Factory. Vizcaya. Customized Design: Jesús Jauregui.
Architect: Luis Lumbreras, Bilbao Arquitectos.

Housing. Sopelana. Vizcaya. Architect: Eduardo Aurtenechea.

Factory Pavilion. Holland.

Congreso Night Club. Bilbao. Design: Guillermo Balzola (Q Design).

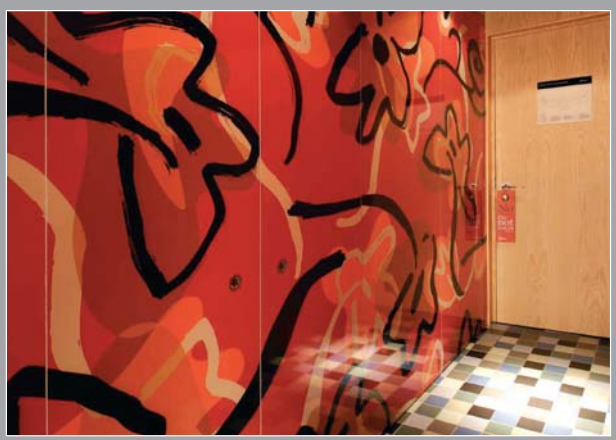
Hospital. Holland.

Housing. Nanterre. France.

Housing. Barakaldo. Spain.
Architect: Javier Linazasoro.

Indoors & Outdoors
Formica® **COMPACT**
Author's Laminate

Private Residence.

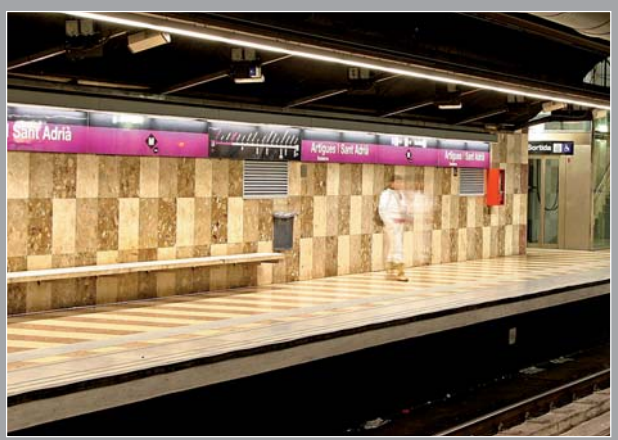


Puerta América Hotel. Madrid.
Design: Fernando Salas & Javier Mariscal.

Mc Donald's. Amsterdam.
Design: Desarc Architects.

Silken Diagonal Hotel. Barcelona. Architect: Juli Capella.

T4 Terminal. Madrid Airport. Architects: Richard Rogers and Estudio Lamela. Graphic design: Addison España.



Barcelona Underground. Architect: Spert, s.a.

Shopping Centre. Amsterdam. Architect: Benthem Crouwel.

Abra aquarium. Spain. Design: Fernando Goytisolo.

VIPS Barcelona Restaurant. Architecture: Antonio Foraster & Victoria Garriga (AV62 Architects).

MAN 22 Pub. Bilbao. Architecture: Verno.

Indoors
Formica® **COMPACT**
Wall Panelling

Diocesan Seminary. Lugo. Architects: Jesús Bouza, Manuel López, Jorge Salvador, Alberte González and Manuel Cortón.

European Forum Headquarters. Navarra.
Architects: Antonio Vaillo and Juan Luis Irigay.

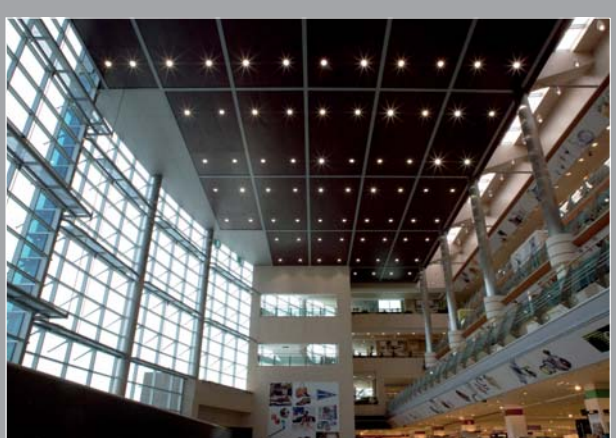
La Nucia Sports Centre. Benidorm.

European Forum Headquarters. Navarra.
Architects: Antonio Vaillo and Juan Luis Irigay.

Quirón Hospital. Madrid. Architect: Alberto de Pineda.

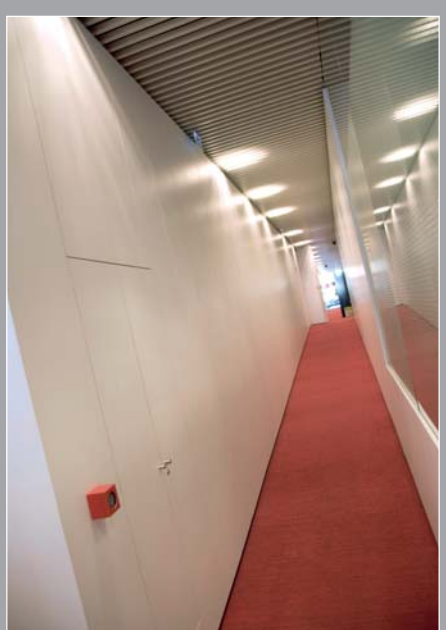
Compostela Health Centre. Architect: Pilar Barroso.

San José Clinic. Pamplona.
Architects: Javier Telletxea and Carmelo Fernández.



El Corte Inglés Shopping Centre. Mijas. Architect: Natalia Santafé.

Dexeus Clinic.
Architects: Artigues & Sanabria Arquitectes.



CAN Savings Bank Offices. Pamplona. Architects:
Jesús Leache & Fernando Tabuenca.

Indoors & Outdoors
Formica® **COMPACT**
Molded, Curved

CAN Savings bank Offices. Pamplona. Architects:
Jesús Leache and Fernando Tabuenca.

Offices. China.

Vodafone Telephony Shop. Palma de Mallorca.

Home bowl.

Casa Barcelona.
Design: Juli Capella.

Diocesan Seminary. Lugo.
Architects: Jesús Bouza, Manuel López, Jorge Salvador, Alberte González and Manuel Cortón.

Washroom.

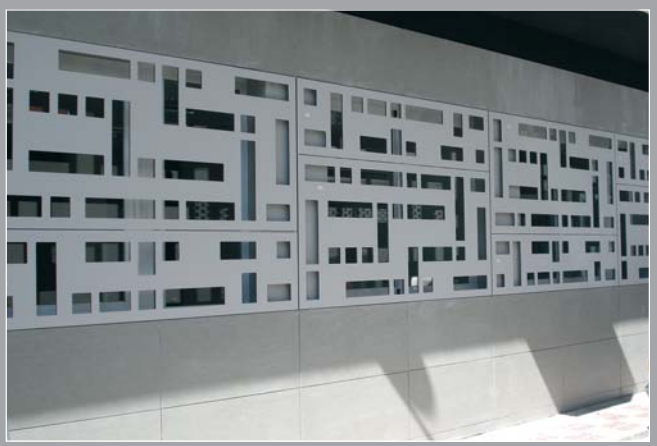
Cepsa Gas Station. Madrid.
Architect: Héctor Ruiz.

Indoors & Outdoors
Formica® **COMPACT**
Perforated

Stand Momo. Furniture fair. Madrid. Design: Murray agencia de diseño.

Las Arenas Hotel Spa. Valencia. Architects:
Francisco Nebot, Ramiro Amorrortu and Jesús Alfaro.

Construmat. Barcelona.
Architects: Juli Capella & Ramón Cortés



Offices. Marbella. Architect: Enrique Vallecillos (Planho Consultores).

Housing. Burgos. Architect: César Morcillo.

Private Residence. Denmark. Architect: Mads Lützen.

Indoors & Outdoors

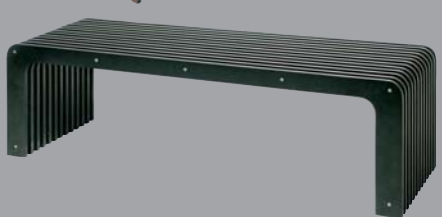
Formica® **COMPACT**

Furniture

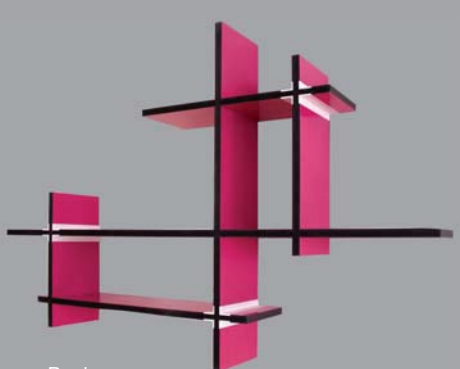
Laboratory, Home and Office

Quirón Hospital. Madrid. Architect: Alberto de Pineda.

Quimxel Chemical Industries. Valencia. DYR Engineers.



Chair and Bench.
Design:
Nancy Robbins,
Ernesto de Ceano
y Teya Masramón.

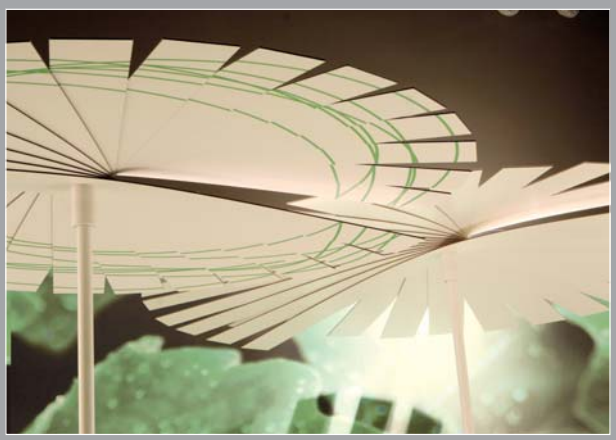


Bookcase.
Design: Jeremy Vanneste and
Damien Gernay (Dustdeluxe). Belgium.

Children's Park. Vizcaya.

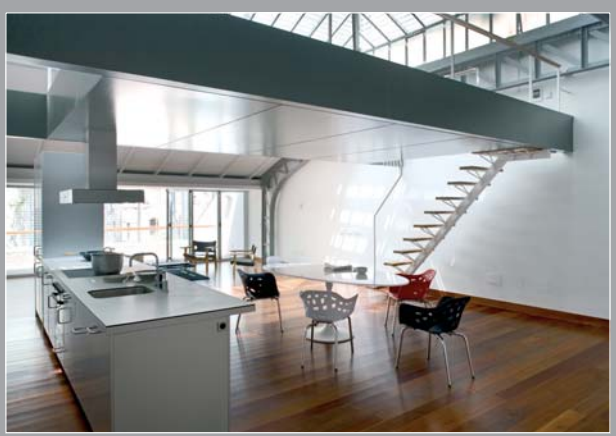
Table “Saturno”. Design: Gunilla Allard. Sweden.

Mandorla System.
Design: Javier Machimbarrena. Spain.



Sunshade “Ensombra”. Design: Odosdesign. Spain.

Table “The Salvatore Occasional Table”.
Design: James Burleigh. England.



Loft. Madrid. Beriot Bernardini Architects.

Chair of garden “0ut”.
Design: Mikael Astrand
(Fiber Design). Sweden.

Office Furniture. Design: Brink. Holland.

Magazine Rack.
Design: Fredrik Paulsen. Sweden.

Indoors
Formica® **COMPACT**
Wet Areas

Acqua Shopping Centre. Valencia.

Unbe Nursing home. Bilbao.
Architect: Emilio Puertas

Emirates Stadium. Arsenal Football Club. UK.

Ikea washrooms. Spain.

Larrabea Golf Club. Spain.
Design: Iñaki López.

European Forum Headquarters. Navarra.
Architects: Toni Vaillo and Juan Luis Irigay.

Indoors
Formica® **COMPACT**
Doors

Cima Laboratory. Pamplona.
Architect: Carlos Docal.

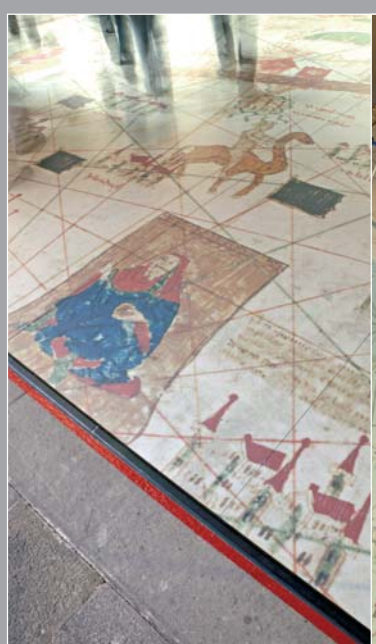
Police offices. Vizcaya. Architects:
Juan Coll-Barreu and Daniel Gutiérrez.

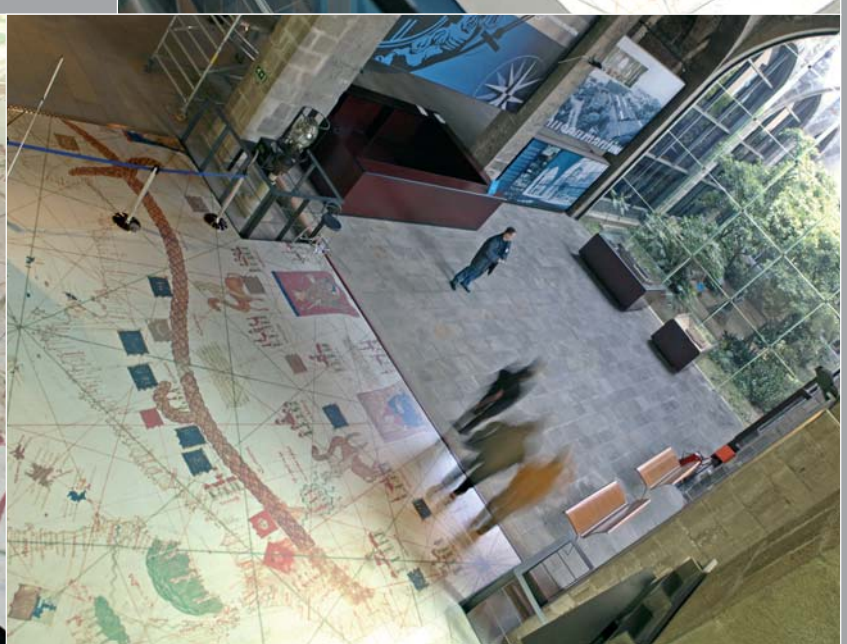
Las Arenas Hotel Spa. Valencia. Architects: Francisco
Nebot, Ramiro Amorrortu and Jesús Alfaro.

Indoors

Formica® **COMPACT**

Personalized flooring



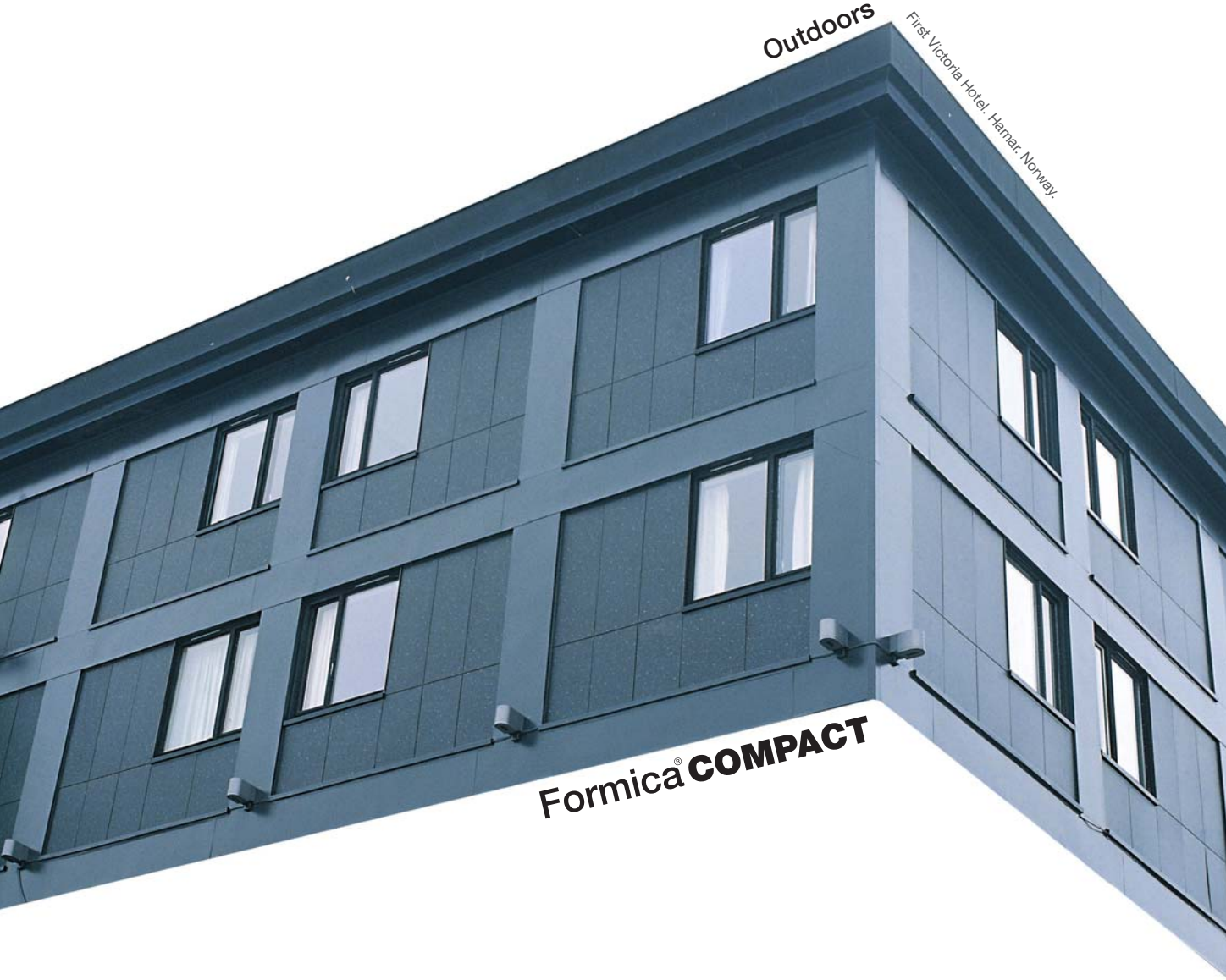


Maritim Museum. Barcelona. Architecture: Fabregat & Fabregat Arquitectes.

Maritim Museum. Barcelona. Architecture: Fabregat & Fabregat Arquitectes.

CasaDecor Madrid. Architect: Nacho James.

Outdoors



First Victoria Hotel. Hamar. Norway.

Formica® **COMPACT**

technical applications

Why Formica **COMPACT**?

- Large sheet sizes, up to 3660x1610 mm (144.09" x 63.38")
- Lightweight. 11 kgs/m² 8 mm thickness
- Efficient. Fast installation and easy maintenance.
- Fire-resistant. Highest building classification possible. B-s1, d0 (EN-13501).
- Environmentally friendly.
- Wide range. 46 designs.
- Possibility of personalization.
- Accredited by the most prestigious Institutes. DIT Plus Certified.

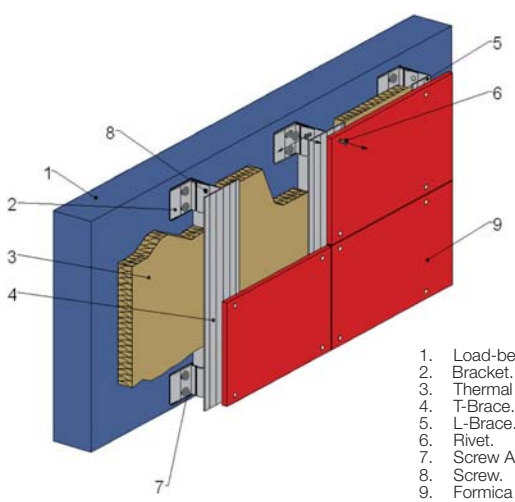
Nº DIT 491

01. Lightweight Ventilated Exterior Façades (Visible fixing)

A ventilated façade is defined as an exterior surface treatment of a building or residence made up of panels attached to a primary substructure and another secondary substructure that permits spontaneous air circulation through the interior between the modulated façade and the load-bearing wall. If this is done using Formica Compact Exterior HPL Laminate, then the façade can be classified as a Lightweight Ventilated Façade.

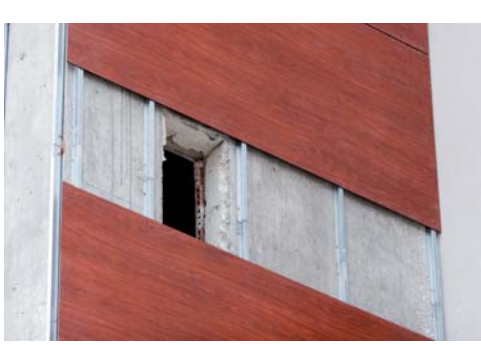
This allows:

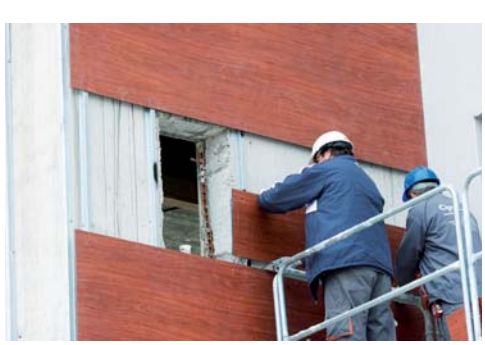
- Placement of intermediary insulating elements that can thermally insulate the building.
- Support of spontaneous air movement that moderates summer heat on the building caused by the temperature gradient from the lower to upper areas.
- Structurally lighter buildings due to the substructure weight of the lightweight ventilated façade.



1. Load-bearing wall.
2. Bracket.
3. Thermal Insulation.
4. T-Brace.
5. L-Brace.
6. Rivet.
7. Screw Anchor.
8. Screw.
9. Formica Compact Exterior.

Figure 1.- Diagram of lightweight ventilated façade





02. Formica Compact Exterior HPL Laminate.

Formica Compact Exterior Laminate consists of:

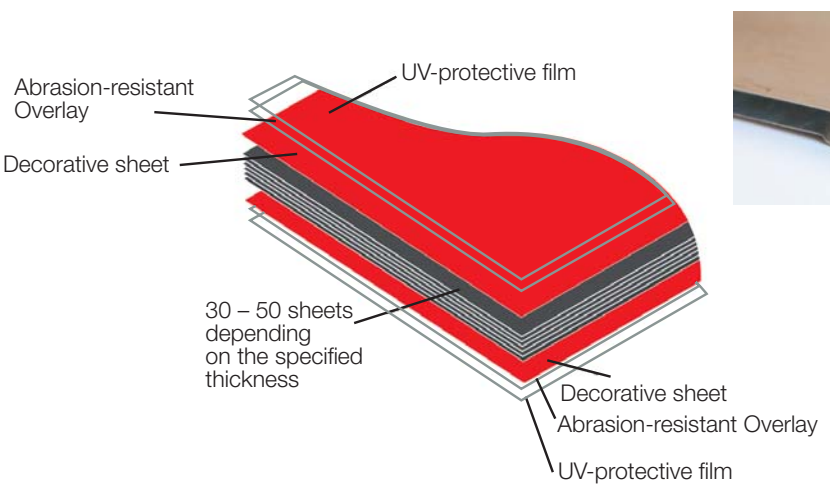


Figure 2.- Diagram of Formica Compact Exterior Laminate build up.

As you can see in the diagram, the composition of Formica Compact Exterior HPL Laminate, (High Pressure Laminate), i.e. a product manufactured in laminate form consisting of paper permeated with phenolic and melaminic thermo-stable resins that are pressed at pressures above 10 MPa (100 kg/cm2) and temperatures of approximately 150º C, make the laminate very compact, stable and unaffected by the environment and ultraviolet rays.

Under EN Standard 438-6-77 2005, the quality of Formica Compact Exterior EDF Laminate means that this laminate is specifically for use in Ventilated Façade applications.

E = Exterior Use
D = Harsh Conditions
F = Fire-Resistant Quality
S = No Fire-Resistant Quality

Lanchid Investment Offices. Madrid. Architect: Martín Olascoaga.

03. Benefits of the Formica Façade.

- **Anti-bacterial**: Inert, non-porous material resistant to the elements, moisture, decay and mold.
- **Building Stability**: Movements of the load-bearing structure are minimized due to the low thermal fluctuation allowed by the laminate.
- **Color Stability**: Unalterable by ultraviolet radiation. No color change or appearance of strange partial discolorations. Grade 4 (grey scale).
- **Design**: Wide decorative range. Forty six designs. All consistent and unalterable. No tone variations from the first panel to the last.
- **Durability**: High resistance to the elements, rain, salty environments and atmospheric pollution. Long-term exposure, should not allow even a minimal loss of color; in any case, it is acceptable.
- **Environmental Statement**: Formica Compact Exterior Laminates do not contain asbestos or substances harmful to the ozone layer. Furthermore, their composition contains no heavy metals or pigments. Laminate remnants are recyclable and do not require any special treatment like other construction waste.
- **Fire-resistance**: Meet European Fire Behavior Standard EN 13 501 classification B, s1- d0. Does not soften, drip or give off toxic smoke.
- **Flatness**: Its laminate structure guarantees a stable flatness under any outside influence of heat or moisture.
- **Humidity**: There is no problem with internal condensation or rain penetration.
- **IImpact Resistance**: As a laminate product, it can withstand, without change, the impact of a 42 mm Ø 0.324 kg steel ball from a height of 1.5 meters at a velocity of 6 meters/second (21.6 km/h) at the moment of impact.
- **Installation**: Fast and easy to install due to its lightness and versatility. After tooling, edges do not need treatment.
- **Lightweight**: Overall lightweight substructure and façade. Density of 1.35 kg/m2/mm. Less than half of any rock product.
- **Mechanical and Chemical Resistance**: No change below 180º C.
- **Personalization**: Allows the creation of custom façades, that is to say, individual façades with design freedom (photographs, illustrations, etc.)
- **Self-cleaning**: Due to its non-porous surface and its electrical insulation, dirt does not stick and rain eliminates any dust that may remain.
- **Sizes**: Three different sizes, 2500x1220, 3050x1300 and 3660x1610 mm for optimal modulations and minimal waste.
- **Sound Protection**: Reduces the noise index coming from the outside by acting as insulation.
- **Stability**: Permanently flat and self-supporting due to the absence of stress and load transfer between laminates since they are attached independently.
- **Standardized**: Fully meets European Product Standard EN 438-6-7 2005 for use on exterior façades. All panels bear CE marking.
- **Thermal Insulation**: No thermal bridge. Allows thermal insulation and ventilation, avoiding heat loss in the winter and heat transmission in the summer.

DIT plus
Nº DIT 491

CSTBat

Of all laminates on the market, Formica is the pioneer and inventor of HPL laminate, meaning that it is a traditional manufactured laminate product with more than 93 years of experience behind it.

Due to its composition, structure, manufacturing, content and directionality, any laminate produced in laminar form has better dimensional stability and higher impact resistance than other products of seemingly equal appearance, and of a similar or different nature created through a different process. Furthermore, its cellulose sheet composition gives it a homogeneity not possessed by other heterogeneous products similar in appearance.

Of course, Formica manufactures its Compacts in a homogenous and laminate form, fully meeting European Standards EN 438-6-7 2005 specifically for Compact Exterior HPL Laminate.

04. Elements of Formica Façade

4.1. Ventilated Façade with Visible Fixing

Formica Compact Exterior Laminate modules are attached with rivets visible from a certain distance and have the following components:

1. **Load-bearing Wall**
- The structure or façade where the lightweight ventilated façade will be placed and attached.

2. **Main Profile**
- L-shaped metallic aluminum pieces called Squares or Clamps that are fixed to the Framing or load-bearing wall with screws called Anchors and on which is also attached the aluminum profile.
- L- or T-shaped Aluminum Profile that is attached vertically to the Clamp through aluminum screws or rivets and where the Formica Exterior Compact Laminate is attached.

3. **Anchors**
- Stainless steel screws that attach the Framing to the Clamp.

4. **Thermal Insulation**
- Insulating material consisting of a panel of glass, rock or other insulating material that is placed on the Load-bearing wall to thermally insulate it.

5. **Rivets**
- Aluminum elements for attaching the L- or T-profile to the Square and also the Formica Exterior Compact Laminate to the Main Profile.

6. **Connecting Screws between Profiles**
- Stainless steel screws used to attach the L- or T-profiles to the Clamp and also the Formica Exterior Compact Laminate to the Main Profile.

4.2. Ventilated Façade with Invisible Fixing

Formica Compact Exterior Laminate modules are attached with hidden rivets that are not visible from the outside and have the following components:

1. **The same components as those previously mentioned with the addition of the following:**

2. **Additional Horizontal Secondary Profile**
- Profile of variable geometry that is attached horizontally to the main profile on L or T by screws.
- Aluminum Leg or Hook of variable geometry that are either hung or screwed to the horizontal geometry-variable profile.

3. **Screws**
- Identical stainless steel screws used in the Visible Connection to attach the horizontal profile to the vertical profile.
- Screws used to attach the hook to the Formica Compact Exterior laminate module.
- Screw Pins used to balance the module and also to attach the hook to the horizontal profile.

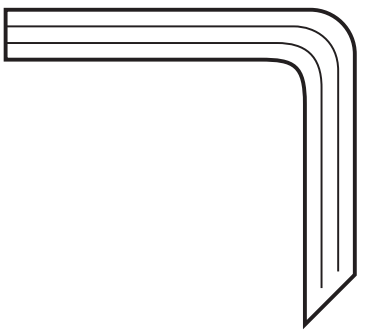
05. Formica Moldable Compact Laminate

A Compact Laminate whose entire thickness is postformable.

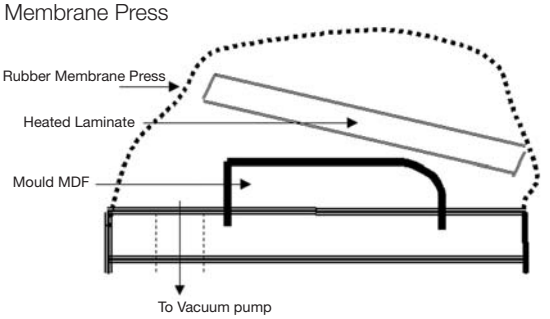
Cross view of the Moldable Compact:

- Film inserted every millimeter to slide between the phenolic core layers.
- The entire thickness is postformable.

The entire thickness is Postformed



Molded with a Membrane Press



Air Extraction using a Vacuum Pump

Minimum radius of Curve:
Thickness 3 mm 15 mm
Thickness 6 mm 25 mm
Thickness 8 mm 30 mm
Thickness 10 mm 35 mm

Measurements:
3050 x 1320 mm

Thicknesses:
3 - 6 - 8 - 10 mm

Vodafone Store. Palma de Mallorca.


Architecture Encounters of Galicia.
Architect: María Calvo. Acxt-IDOM.

FORMICA COMPACT EXTERIOR				
PROPERTY	TEST STANDARD (EN 438-2)	PROPERTY OR ATTRIBUTE	UNIT (max. or min.)	VALUE
Bending Module	EN ISO 178:2003 (1)	Strength	Mpa (min.)	9000
Bending Stress	EN ISO 178:2003 (1)	Strength	Mpa (min.)	80
Tensile Strength	EN ISO 527-2:1996 (2)	Strength	Mpa (min.)	60
Density	EN ISO 1183-1:2004	Mass	g/cm^3 (min.)	1,35
Impact Resistance (Large Diameter Ball)	21 (3)	Height of Drop	mm (min.)	1800
Moisture Resistance	15	Increase in Mass	% (max.)	8
		Appearance	Grade (min.)	4
Dimensional stability at high temperatures	17	Accumulated dimensional change	% (max.) L (4)	0,3
			% (max.) T (5)	0,6
(1) Head travel velocity of 2mm/min.				
(2) 1st type test tube. Head travel velocity of 5mm/min.				
(3) The diameter of the notch created should not be more that 10 mm.				
(4) L= in the length of the laminate				
(5) T= in the width of the laminate				

Weather-Resistant Properties

Weather resistance is the behavior of the exterior laminate in relation to superficial degradation, loss of color and reduction of mechanical properties due to exposure to sunlight, rain, ice, etc.

PROPERTY	TEST STANDARD (EN 438-2 chapter No.)	PROPERTY OR ATTRIBUTE	UNIT (max. or min.)	VALUE
Climatic shock	19	Appearance	Grade (min.)	4
		Dm Index of bending stress	(min.)	≥ 0,95
		Dm Index of bending stress	(min.)	≥ 0,95
UV Resistance	28	Contrast	Grey Scale (min.)	≥ 3 (1500 hours of exposure)
		Appearance	Grade (mín.)	≥ 4 (1500 hours of exposure)
Resistance to artificial weathering (including light fastness) (EDF only)	EN 438 2-29	Contrast	Grey Scale	≥ 3 After exposition 650 MJ/m^2
		Aspect	Grade (Table II)	≥ 4 After exposition 650 MJ/m^2

Fire Reaction Properties

According to regulation EN 13501-1 which is the regulation used for construction products, Formica exterior laminates are classified as B-s1, d0 for fire resistance or C-s1 for non-fire resistance.

FIRE BEHAVIOR			
FIRE PERFORMANCE CLASSIFICATION	REGULATION	FIELD	VALUE
Formica Compact Exterior Laminate	EN 13501 - 1	EGF	B - s1, d0
		EGS	C - s1, d0

FORMICA LAMINATES

HIGH PRESSURE COMPACT: CGS Interior Standard - CGF Interior FR / EDS Exterior Standard - EDF Exterior FR

TEST	STANDARD	PROPERTY	UNIT	STANDARD EN 438 6	
				CGS/EDS	CGF/EDF
Density	ISO 1183	Mass	g/cm^3	≥ 1,35	
Length and width	EN 438 2 - 6	Sheet	mm	+ 10 - 0	
Straightness of edges	EN 438 2 - 7	Sheet	mm	≤ 1,5	
Squareness	EN 438 2 - 8	Sheet	mm/m	≤ 1,5	
Thickness	EN 438 2 - 5	8,0 ≤ e < 12,0	mm	tol. ± 0,5	
		12,0 ≤ e < 16,0		tol ± 0,6	
Flatness	EN 438 2 - 9	2,0 ≤ e < 6,0	mm	≤ 8,0	
		6,0 ≤ e < 10,0		≤ 5,0	
		10,0 ≤ e -		≤ 3,0	
Resistance to Surface wear	EN 438 2 - 10	Initial Point	Cycles	≥ 150	
		Wear Value		≥ 350	
Resistance to Scratching	EN 438 2 - 25	Other Finish		Int ≥ 3	Int ≥ 3
				Ext ≥ 2	Ext ≥ 2
Impact resistance (By large diameter ball)	EN 438 2 - 21	Drop height 2 ≤ e ≤ 6 mm	Height mm	≥ 1400	
		Drop height e > 6 mm	Height mm	≥ 1800	
		Diameter of indentation	mm	≤ 10	
Resistance to Dry Heat (180° C)	EN 438 2 - 16	Gloss Finish	Grade (Table II)	≥ 3	
		Other Finish		≥ 4	
Resistance to Immersion in Boiling Water	EN 438 2 - 12	Mass increase	% Max 2 ≤ e ≤ 5 mm	≤ 5,0	≤ 7,0
			e > 5 mm	≥ 2,0	≥ 3,0
		Thickness increase	% Max 2 ≤ e ≤ 5 mm	≤ 6,0	≤ 9,0
			e > 5 mm	≤ 2,0	≤ 6,0
		Gloss Finish	Grade (Table II)	≥ 3	
		Other Finish		≥ 4	
Dimensional Stability At High Temperature	EN 438 2 - 17	Cummulated Dimensional Change	% 2 ≤ e ≤ 5 mm Longwise	≤ 0,40	
			% 2 ≤ e < 5 mm Crosswise	≤ 0,80	
			% e ≥ 5 mm Longwise	≤ 0,30	
			% e ≥ 5 mm Crosswise	≤ 0,60	
Resistance to Staining	EN 438 2 - 26	Group: 1 y 2 (Table III)	Grade (Table II)	5	
		Group: 3 (Table III)		≥ 4	
Resistance to Cigarette Burn	EN 438 2 - 30	Aspect	Grade (Table II)	≥ 3	
Resistance to colour change in xenon arc light (EDF only)	EN 438 2 - 27	Contrast	Grey Scale	4 - 5	
Resistance to Climatic Shock	EN 438 2 - 19	Aspect	Grade (Table II)	≥ 4	
		Flexural strength index	Ds	≤ 0,95	
			Dm	≤ 0,95	
UV Resistance (EDF only)	EN 438 2 - 28	Contrast	Grey Scale	≥ 3 (1500 hrs exposition)	
		Aspect	Grade (Table II)	≥ 4 (1500 hrs exposition)	
Resistance to artificial weathering (including light fastness) (EDF only)	EN 438 2 - 29	Contrast	Grey Scale	≥ 3 After exposition 650 MJ/m^2	
		Aspect	Grade (Table II)	≥ 4 After exposition650 MJ/m^2	
Stress cracking	EN 438 2 - 24	Aspect	Grade (Table II)	≥ 4	
Resistance to water vapour	EN 438 2 - 14	Aspect (Table II)	Grade Gloss Finish	≥ 3	
			Grade Other Finish	≥ 4	
Flexural modulus	ISO 178	Stress	Mpa	≥ 9.000	
Flexural strength	ISO 178	Stress	Mpa	≥ 80	
Tensile strength	ISO R 527	Stress	Mpa	≥ 60	
Thermal expansion Coeficient	ASTM D 696	Size increase	°C (-1)	Long. 1,6 x 10 $^{(-5)}$	
				Transnv. 3,4 x 10 $^{(-5)}$	
Fire Class	EN 13501 - 1:2002	Clasification	e ≥ 6 mm	-	B - s1, d0
			e < 6 mm	-	C - s1, d0

Note: Formica guarranty the results of the above test result and the colour consistency during 10 years for the exterior application of this laminate.

Grade CLASSIFICATION

Grade 1: Very evident change in gloss and/or colour.
Grade 2: Marked change of gloss and/or colour.
Grade 3: Moderate change of gloss and/or colour.
Grade 4: Slight change of gloss and/or colour, only visible at certain viewing angles.
Grade 5: No visible change

GROUP OF REACTIVES

Group 1	Group 2	Group 3
• Acetone • Trichloretane • Other organic Solvents • Tooth Paste • Hand cream • Urine • Alcoholic Drinks • Natural Fruit and Vegetables • Meat and sauces • Olive oil and Fats • Yeast in water suspension • CINa Salt Solution • Water • Mustard • Bleach & Soap solution • Cleaner solution: 23% dodecilbencenesulfonate 10% alkilaril ether glicol 67% water • Phenol and Chloramine T • Disinfectant • Citric acid 10% • Organic Solvents for Paints	• Coffe (120 gr/liter) • Tea (9 gr/liter) • Milk • Cola drinks • Wine and Vinegars • Alkaline Cleaners at 10% in water • Hydrogen peroxide at 3% • Ammonia at 10% • Painting of fingernails • Solvent for painting of fingernails • Lipstick • Tints for cloth • Ballpen	• Caustic Soda 25% • Hydrogen peroxide 30% • Shoe polish • Vinegar 30% • Sanitary cleaners • Merchromin • Bleach agents contining sanitary cleaners • Cleaners containing Hidrochloric acid <3% • Hair tint • Acid metals cleaner • Iodine • Boric acid • Lacquers and adhesives (except fast curing) • Aminesufonic acid < 10% (Decalant agents)
• Reactive applied at room temperature during 16 hrs, except Coffe - Tea -Milk at 80º C		• Reactives applied at room temperature during 10 minutes

Apartment Building. Las Palmas

Apartment Building. Vizcaya
Architect: Eduardo Aurtenechea

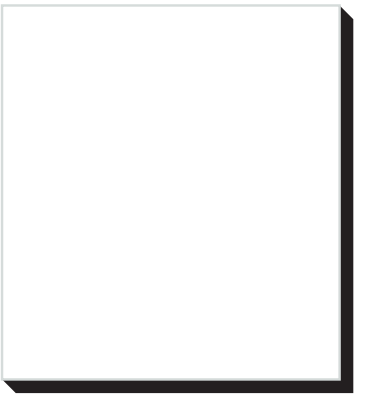

Indoors & Outdoors
Formica® COMPACT

range of colors

Formica **COMPACT**, phenolic panel, has a wide range of interior and exterior applications. 46 colors & patterns that give every creation a personal touch and make every project a unique jewel.

Thicknesses:
· Façades: 6, 8, 10 mm (0.24", 0.31", 0.39")
· Cubicles & Lockers: 10 & 12 mm (0.39", 0.47")
· Paneled and reverse: 6 mm (0.24")

Sheet sizes:
· 2500x1220 mm (98.42" x 48.03")
· 3050x1300 mm (120.07" x 51.18")
· 3660x1610 mm (144.09" x 63.38")



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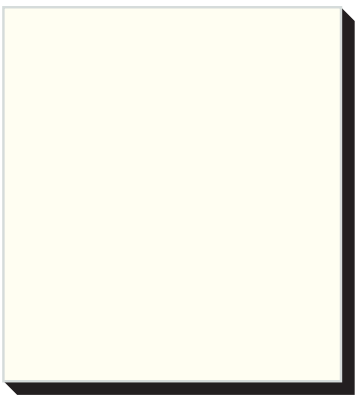
Blanco Polar



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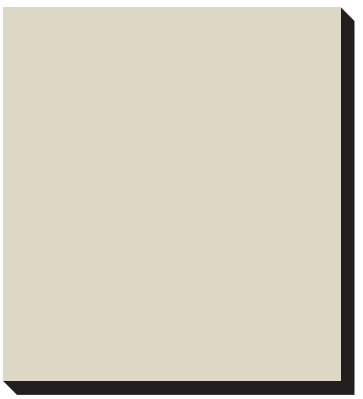
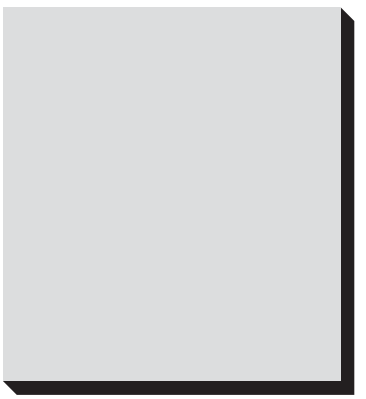
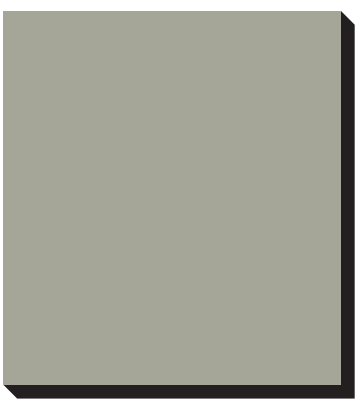
Sno White



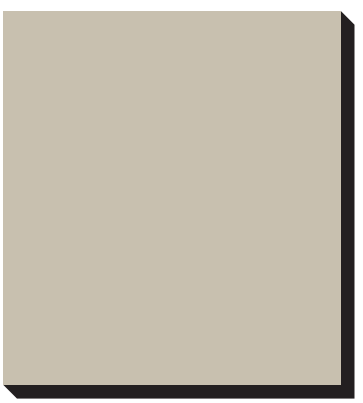
F7858
Pumice



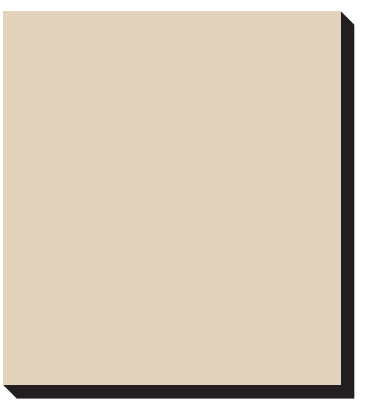
F7927
Folkestone



F7961
Fog

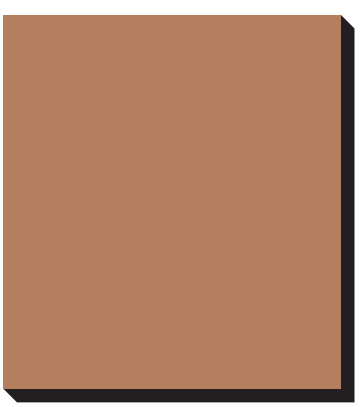


F7929
Oyster Grey



F2833
Sandstone

F0902 (K1834)
Kashmir



F2014 (K2014)
Gauguin

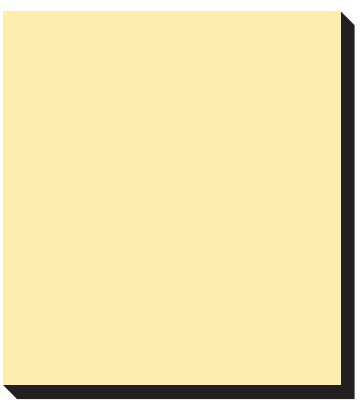
F2200
Dark Chocolate

Printed samples are shown at approximately 1:1 scale.

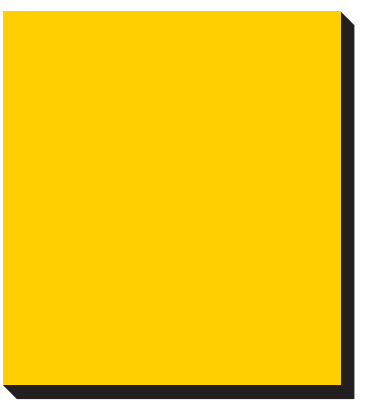
K3735
Krypton

F7912
Storm

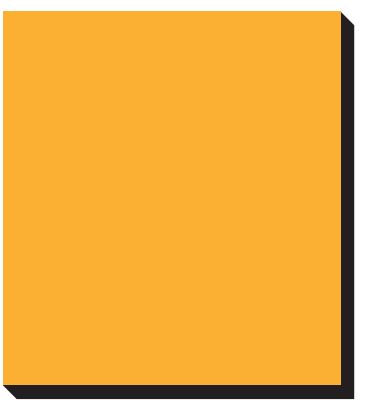
F7837
Graphite



F7882
Pale Gold

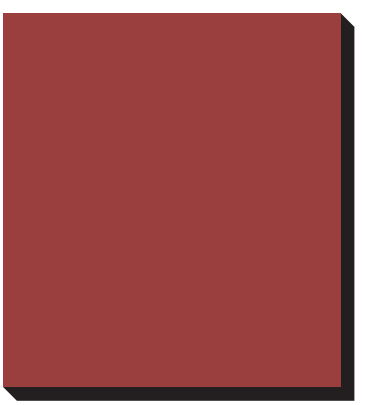


F7940
Spectrum Yellow

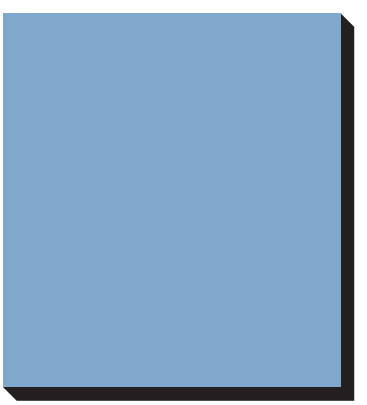


F4155
Sun

F7845
Spectrum Red



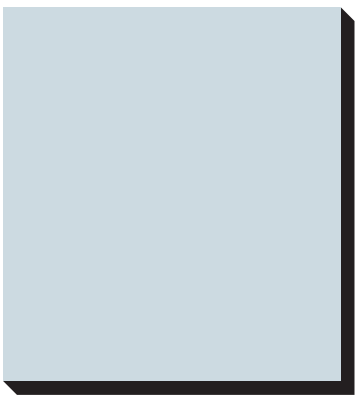
F2005 (K2005)
Paprika



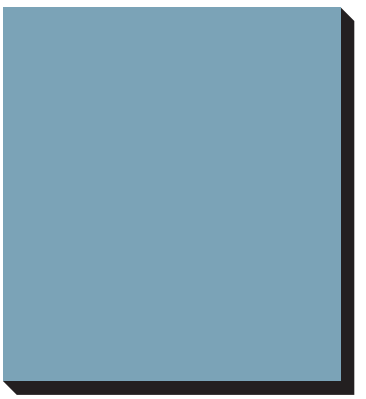
F7884
China Blue

Printed samples are shown at approximately 1:1 scale.

F7851
Spectrum Blue

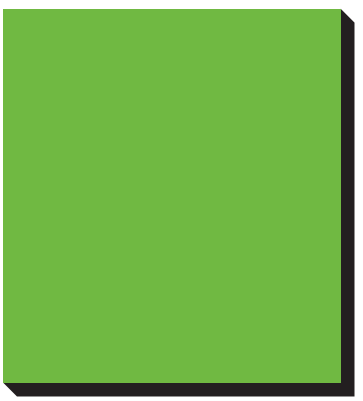


F7938
Glacier

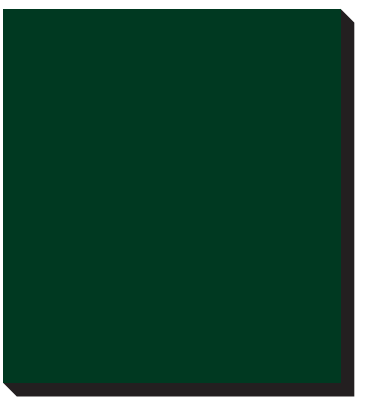


F1998 (K1998)
Oslo

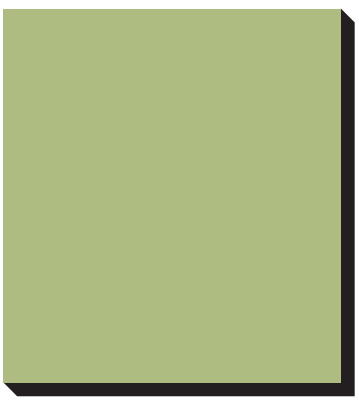
F0904 (K2017)
Acapulco



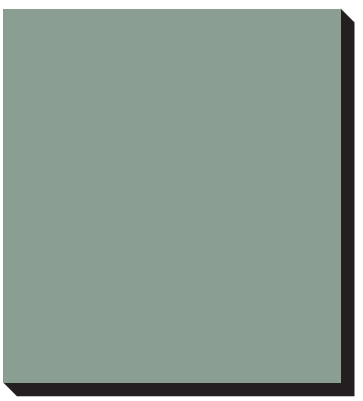
F6901
Vibrant Green



F7967
Hunter Green



F3007
Pale Olive



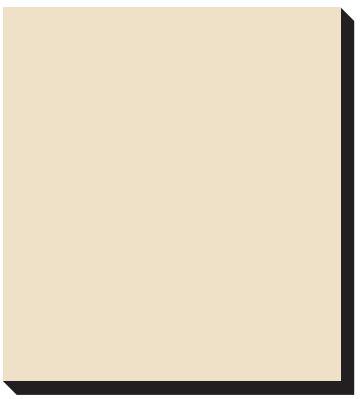
F1202 (K1202)
Basil

F1327 (K1327)
Fiji

Printed samples are shown at approximately 1:1 scale.

F1148
Yellow

F1155
Brown



F2273
Seringa

F2726
Natural Beech

F3855
Clear Maple

F5532 (F2985)
Erable Whisky

F5530 (F2887)
Savoy Beech

F5511 (F2884)
Vosges Pear

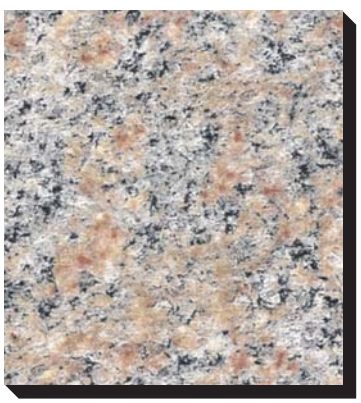
F0905 (K7010)
Mahogany

Printed samples are shown at approximately 1:1 scale.

F0163
Fantasy Brown

F5513 (F1293)
Redwood

F1614
Punga Wood



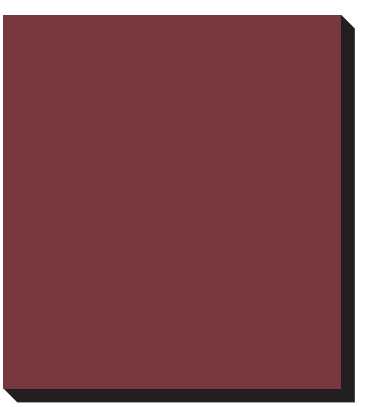
F6221
American Rose Granite

F6220
Smoke Quarstone

F6219
Walnut Quarstone

K5583
Steel

F3690
Basalt Slate



F7966
New Burgundy

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Nº 59-985 / 59-984

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Indoors & Outdoors
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