

NOVAPLAK[®]

BY NOVAFLOOR[®]



Established in 1996 **NOVAFLOOR®** built a pilot plant in Coquelles, near Calais France.

Using recycled plastics and mineral fillers as raw material, **NOVAFLOOR®** developed an innovative technology to produce a new building material called **NOVAPLAK®**,

In 2010 **NOVAFLOOR®** acquired from **sabic**, the plasturgy department of an ABS production plant built and operated by **General Electric Plastics** in Villiers – Saint – Sepulcre near Beauvais France. **NOVAFLOOR®** adapted the production equipment to make it compatible with the technology developed in its pilot plant.

NOVAFLOOR®'s present industrial facility is equipped with 5 production lines with a capacity of 3 tons/hour each.

A fully equipped lab enables Novafloor to continue its research and development program, to develop new raw materials using mixed plastics presently not recycled but incinerated.

Sustainability for Greener Construction

Recycled and recyclable, **NOVAPLAK®** proudly earned the label eco friendly building material.

Water and vapor proof, resistant to aggressive environmental influences, corrosion free, fire resistant, high impact strength, high resistance to scratch, non slippery, paintable, nailable, thermoformable, does not adhere to concrete, does not necessitates the use of form release agents, easy to work with, are the main properties that makes **NOVAPLAK®**, a unique building material.

In the early stage of construction, **NOVAPLAK®**, in this application brandnamed **NOVAFORM®**, is advantageously used as a substitute to marine plywood, for formwork and architectonic concrete stamps. Contractors applying modern techniques, appreciate its superior performance and versatility.

Flooring, cladding, partitioning, roofing, are among other applications of **NOVAPLAK®** in the building industry. In those applications **NOVAPLAK®** is brandnamed **NOVAMARINE®**, **NOVACLAD®**, **NOVAROOF®** etc.

Maintenance free and cost effective, **NOVAPLAK®**, with it's customisable infinite decorative possibilities is much appreciated by most demanding architects and designers, seeking personalised, impressive results.



RECYCLED &
RECYCLABLE



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NOVAPLAK TECHNICAL DATA

DESCRIPTION

NOVAPLAK® is a rigid water resistant Composite Plastic sheet with exceptional impact strength properties suitable for a wide range of applications.

COMPOSITION

Composite plastics reinforced with micronised fillers.

USES

NOVAPLAK® is a composite sheet mainly used in the building industry. Concrete formwork for fairface or structured concrete works.

- * Exterior wall cladding
- * Interior wall covering
- * Partitions and sandwich panels with or without insulation
- * Flooring
- * Roofing
- * Prefabricated houses

DIMENSIONS

Width (maximum): 1300mm

Length (standard): 3000mm

Thickness: from 2.0 to 25mm (1mm increment)

(Other dimensions on special order)

PROPERTIES

Weather-resistant, moisture-resistant and non swelling, excellent stability and impact strength, resistant to aggressive environmental influences, corrosion free and chemical-resistant, thermoformable, excellent surface characteristics, scratch resistant, does not adhere to concrete, easy to work with.

SCRATCH RESISTANCE

Exceptional resistance to scratch. With proper care, a formwork made with **NOVAPLAK®** can be used several times.

WATER ABSORPTION

Non absorbant and non porous. **NOVAPLAK®** is water and moisture resistant.

FIRE RESISTANCE

Conforms with french classification M1

DIMENSIONAL STABILITY

Coefficient of expansion: 0.01 mm/°C/m

ELECTRICAL RESISTANCE

Ca. 1010 Ohm

RESISTANCE TO CHEMICALS

Resistant to concentrated acids, alkalies, fats, oils and strong detergents.

Liable to be attacked by chlorinated and aromatic solvents, esters and ketones.

Technical data sheet /single

Thickness	Elasticity	Water absorption	Fire Class	Compressive strength	U-Value	K-Value	Density	Electrical resistance	Coefficient of linear expansion	STC
mm	Mpa	%	French	N/mm ²	W/m ² .°K	Btu/hr.ft ² .°F	g/cm ³	Ohm	mm/m/°C	db
4	3850	0	M2	75	0.17	0.03	1.5	1010	0.1	36
5	3850	0	M2	75	0.17	0.03	1.5	1010	0.1	36
8	3850	0	M2	75	0.17	0.03	1.5	1010	0.1	34
10	3850	0	M2	75	0.17	0.03	1.5	1010	0.1	32
12	3850	0	M2	75	0.17	0.03	1.5	1010	0.1	30

Technical Properties

Properties	Test	Unit	Value
Physical			
Density	DIN53479	g/cc	1.5
Hardness	DIN53505	Shore D	90
Water Absorption	DIN53490	%	0.01
Mechanical			
Tensile Strength	DIN53455	MPa	≥ 45
Charpy Impact Strength	DIN 53253	KJ/M ²	≥ 7.5
Izod Impact Strength	ASTM D256	KJ/M ²	No Break
Flexural Strength	DIN 53452	MPa	80
Drop Impact Strength (Height : 1.8 m & mass : 0.3 kg x thickness)	IS 6307	-	Pass
Compressive Strength at 10% Deformation	DIN 53421	MPa	60
Thermal			
Vicat (B/50)	DIN 53460	°C	80
Heat Deflection Temperature @ 1.8 MPa	DIN 53461	°C	65
Coefficient of linear Thermal Expansion	ASTM D 696	°C-1	7.07 x 10-5
Electrical			
Surface Resistivity	ASTM D 257	W	2.8 X 10 16
Volume Resistivity	ASTM D 257	W-cm	8.1 x 10 15
Dielectric Constant at 1 MHZ	ASTM D 150	-	3.13
Dielectric Strength	DIN IEC 243	KV/mm	16.8
Dimensional Change at 120 ± 2°C	BS 3757	%	≤ 15

NOVAPLAK FLOORING

NOVAPLAK® sheets, in wide collection of colors and textures, can be grooved, cut to shapes and sizes to suit all needs for creative looks and design.





NOVAPLAK CLADDING

Conceived with your facades and interiors in mind, the **NOVAPLAK**[®] range incorporates the highest standards of durability, flexibility and style. **NOVAPLAK**[®] comes in various colors and textures that can even be used to highlight feature walls as decorative elements by interior designers and architects.



Brown color used for interior





Sea front Villa in Lebanon



Skirting



NOVAPLAK®, branded as **NOVACLAD®** is used for cladding.

Rot proof, chemically inert, highly resistant and easy to clean Novaclad's surface, can be smooth or structured by thermoforming to satisfy specific needs.

A wide variety of textures is available for most interior and exterior cladding applications.

Mass tinted, **NOVACLAD®**'s surface can as well be painted. Most conventional concrete, wood, steel or plastic paints, are compatible with **NOVACLAD®**. Creativity is limitless with **NOVACLAD®**.



NOVAPLAK CLADDING

In commercial buildings, cladding weight, ease and speed of installation, is of the essence.

A 1sq meter of **NOVACLAD®** In 4mm thickness weighs 6.4 kg only.

1.2sq meters of **NOVACLAD®** can easily installed in less than 6 minutes.



The classic problem of sunlight affecting traditional building materials, is irrelevant with **NOVACLAD®**.



With **NOVACLAD®**, a limited number of fitters, is needed to quickly cover a large size building.



NOVAPLAK MARINE

Ideal for all flooring in humid areas, **NOVAMARINE®** is flexible and easy to install. It is a range of high-performing products that offers more comfort when used. It is water and moisture-proof, non-inflating and non-slipping.

It combines the advantages of being lightweight and offering a wide range of colors in order to meet the optimum customer's requirements.



NOVAMAT® non-slippery slats are raised on legs, to cater for necessary water drainage, providing an ideal solution for safe, detergent resistant shower mats.



Relax! Kids playing the fool on a wet, anti-slip **NOVAMARINE®** pool deck surface, is of no special concern.





NOVAPLAK ROOFING



Since no maintenance is needed NOVAROOF is the most practical solution for your roof tops



NOVAROOF® integrates its own boards and ridges which allows for clean improved finishing as well as simplified assembly. It is chemically inert to the decomposition of natural residues created by birds, leaves, and weather conditions. **NOVAROOF®** is manufactured in a variety of colors.





Smoker's room in GlaxoSmithKlein production site in Evreux- France

NOVAPLAK LANDSCAPING

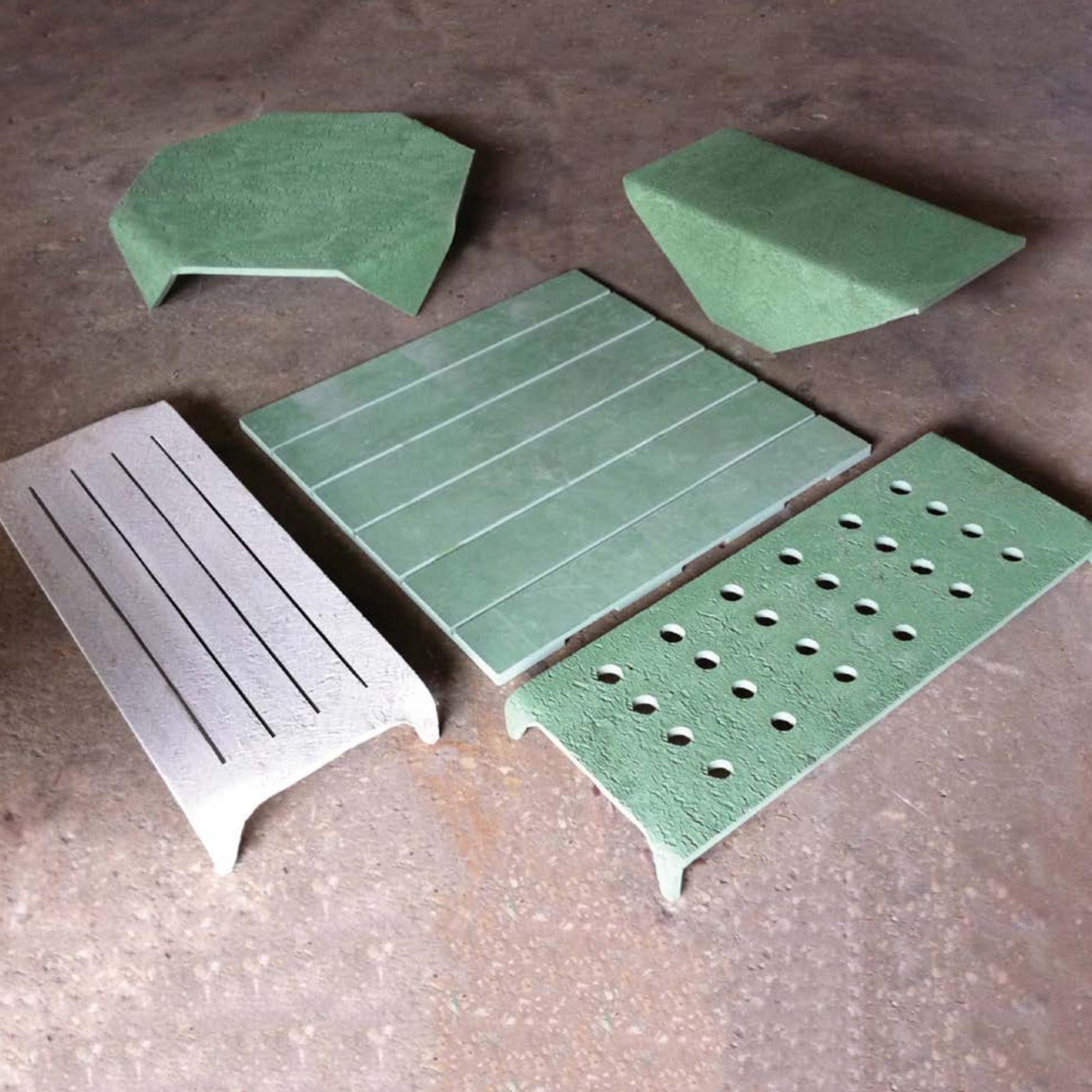
NOVAPLAK® is an environmentally friendly product, particularly adapted for landscaping applications. It offers a high value for money ratio, while respecting eco-design standards.



Protect your garden with a new green material **NOVASTEP®**



Anti fungal and anti bacterial, NOVAPLAK®, resistant to aggressive environmental influences, will last long in landscaping applications.



NOVAPLAK NOVABORDURE



Novabordure under execution



Car runway finished



NOVABORDURE® is a composite sheet made of 100% recycled materials; it is used as a garden edging. Water resistant, rot-resistant and decorative, it replaces advantageously wood or metal edges. It can be used on flat and sloped surfaces and can be bended in round shapes. Installing is quick and easy.



Car stop Border



Go as far as you can



NOVABORDURE® separation between grass and runway

Standard sizes:

Length: 1- 2 or 3m

Width: 15 - 20 or 30mm

Thickness: 5 -10 or 12mm

* Other dimensions available upon request.

NOVAPLAK HOUSING



An 80m² two bedroom prefab apartment dismantled



Insulated mobile home, financed by British Gas UK built to illustrate the energy saving potential of Novaplak insulated sandwich panels.



NOVAPLAK[®], anti-fungal, anti-bacterial dog shelters, built for SPA France.



NOVAPLAK FORMWORK



Curved formwork in Shangrilla Hotel construction site - UAE



Used instead of the plywood, but 10 times more



NOVAFORM® easy dismantling, construction site France.
NOVAFORM®, as substitute to plywood, but 10 times more durable.



Before & after, Elevator housing - Rotana Hotel - UAE

NOVAFORM®, recyclable, fire retardant, easy to work with, formwork sheet, used as substitute to marine plywood for fairfaced concrete, and architectonic concrete stamp, for structured concrete finish. Scratch and alkali resistant **NOVAFORM®** will not be

damaged by steel reinforcing bars nor by wet concrete. No release agent is needed for demolding Novaform in its multiple use cycle. **NOVAFORM®** will readily shape into circular forms.



NOVAPLAK OTHER USAGE



12 years old, under severe weather conditions, NOVAPLAK® still looking like new.



Partitions

Through its malleability, **NOVAPLAK®** can be adapted to different forms of applications, generating eco-friendly solutions to existing problems. It can be easily cut, bent, grooved and painted to meet your different requirements.



Versatile, NOVAPLAK® is used in a wide variety of applications. It can be cut, bent, grooved, nailed, glued, painted, lackered, etc. to meet most demanding needs.

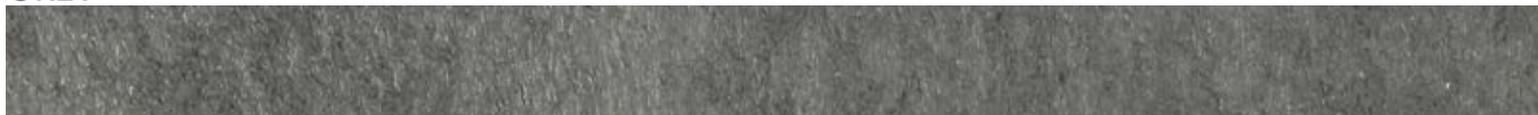


Color Palette

CREMA BLANCA



GREY



DARK GREY



MIST GREY



BOIS DE ROSE



MOCCA BROWN



PISTACHIO GREEN



Textures

NTS



NTR



NTW



DTC1



DTC2



Product Name:

NTR: Natural texture rough

NTS: Natural texture smooth

NTW: Natural texture wood

DTC: Deco texture ceiling

DTF: Deco texture furniture

FTC: Form texture for construction

Available thickness:

1- NTR/ NTS:

3 mm/5 mm/8 mm/10 mm/12 mm.

* Other thicknesses are available upon request.

2- NTW/DTC/DTF/FTC: 3mm/5mm.

* Other thicknesses are available upon request.

Stock sheet sizes:

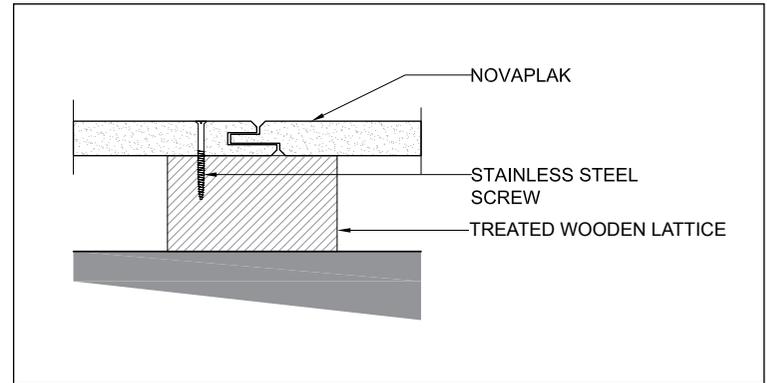
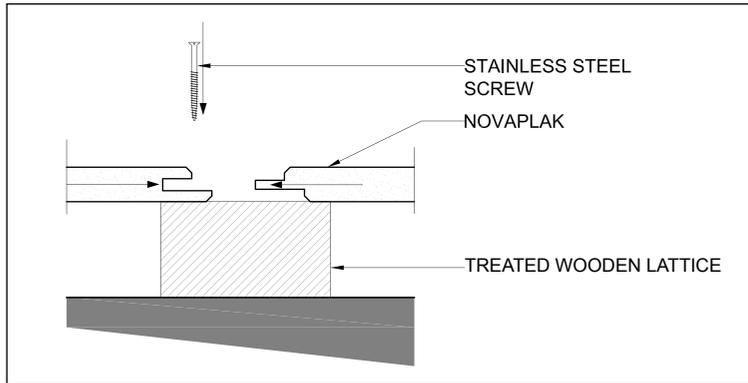
3mm - 5mm : 3050mm x 1250mm

8mm - 10mm : 2000mm x 1000mm

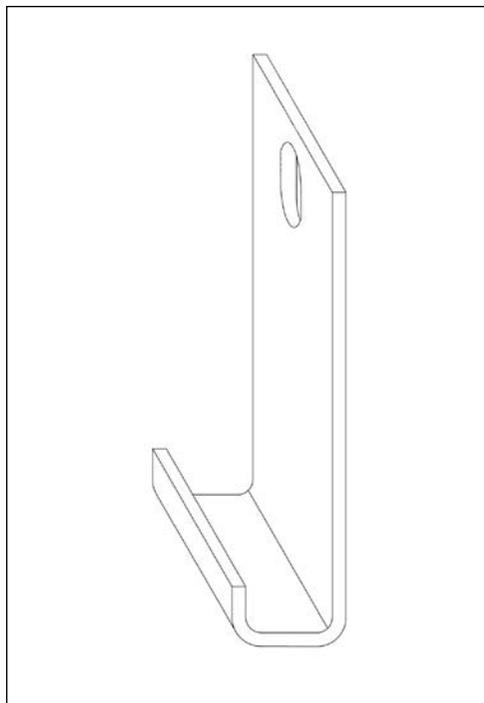
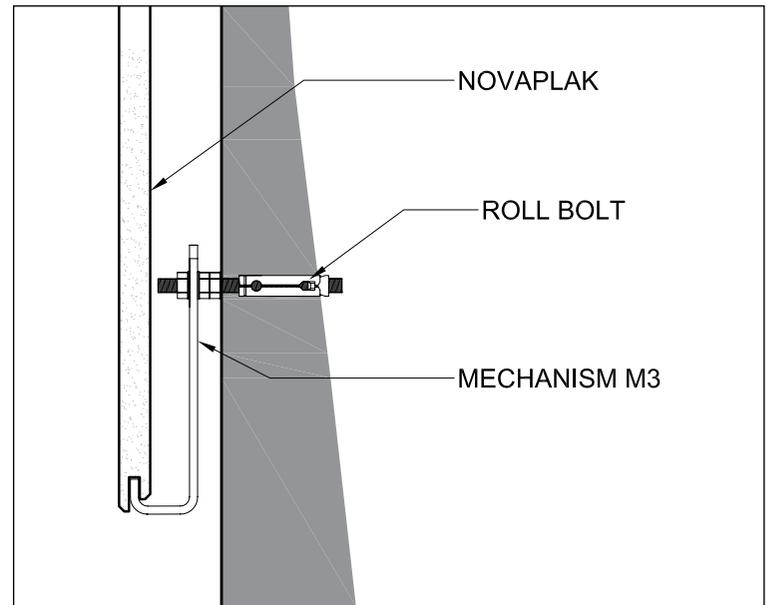
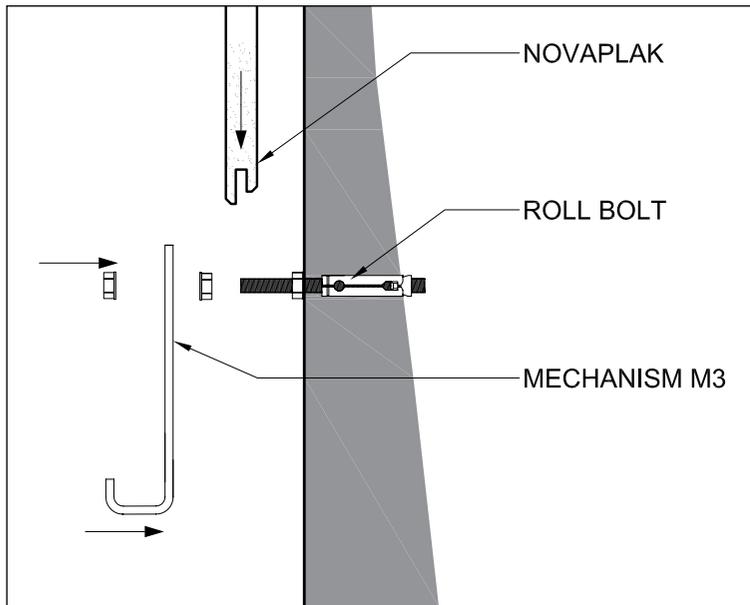
12mm or more : 1550mm x 1050mm

* Special colors are available upon request

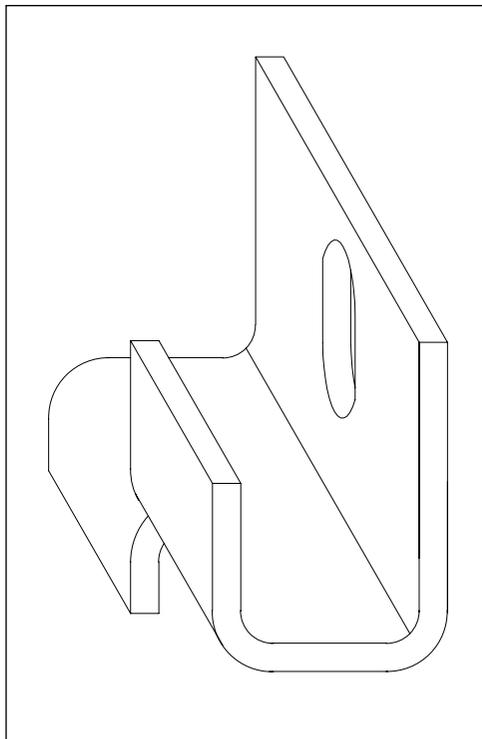
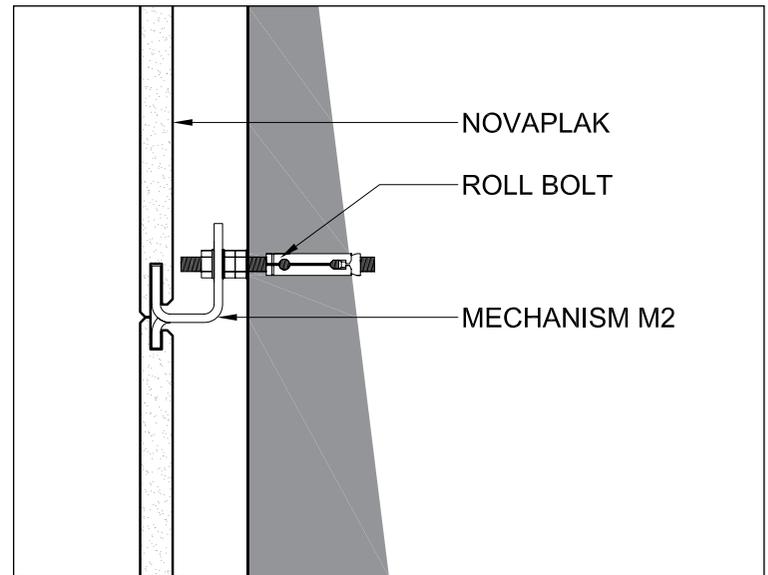
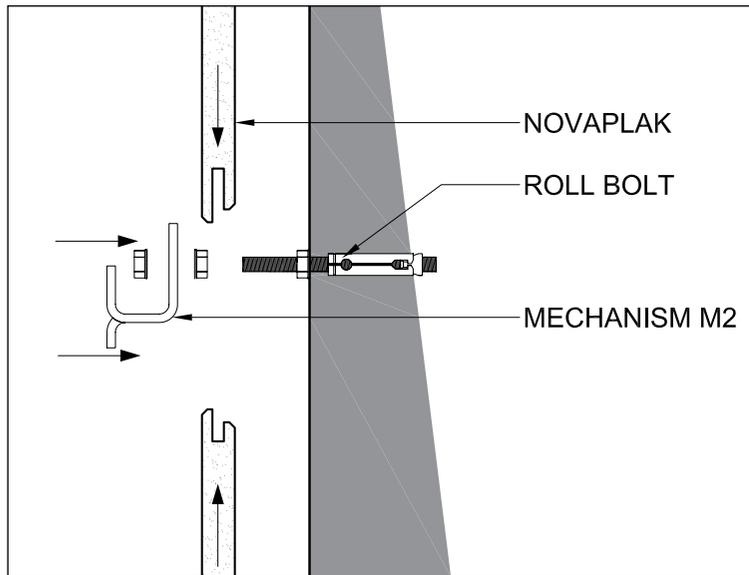
Application Details - **FLOORING**



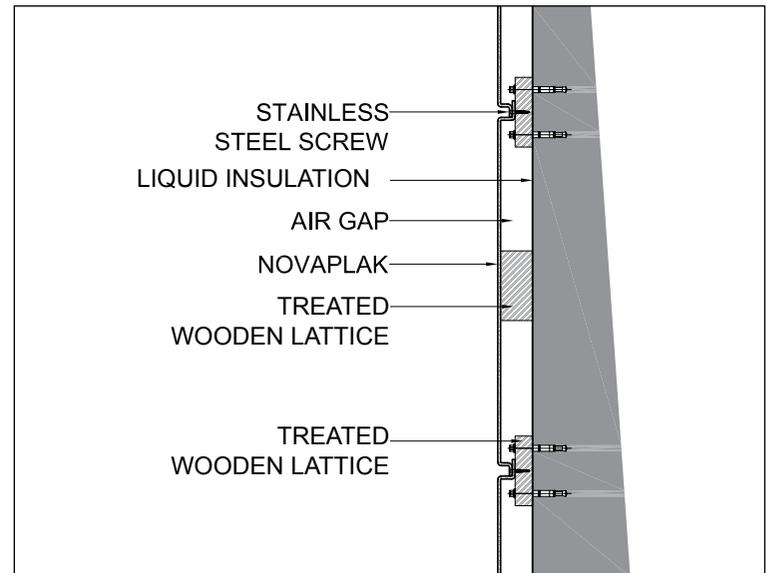
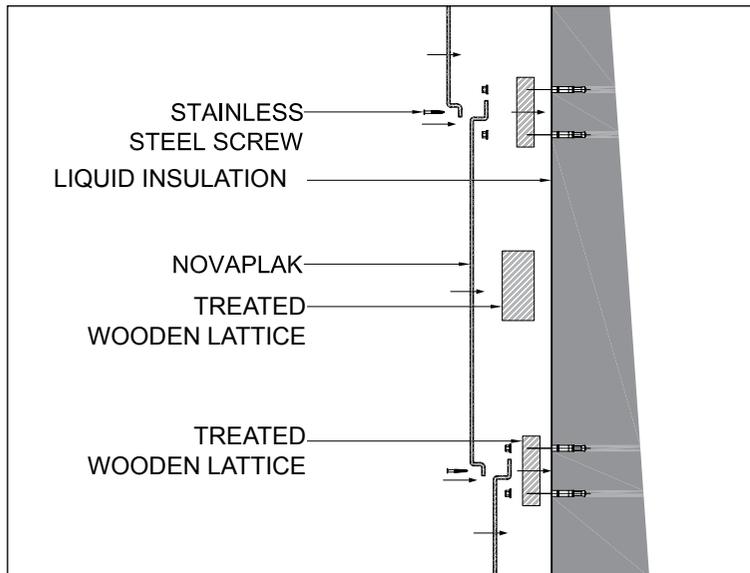
Application Details - **BASE CLADDING**



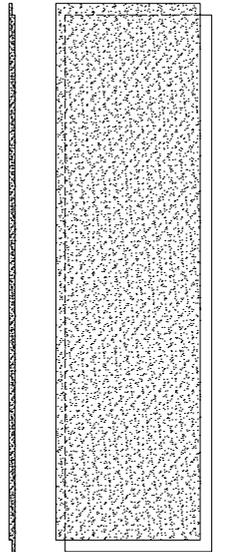
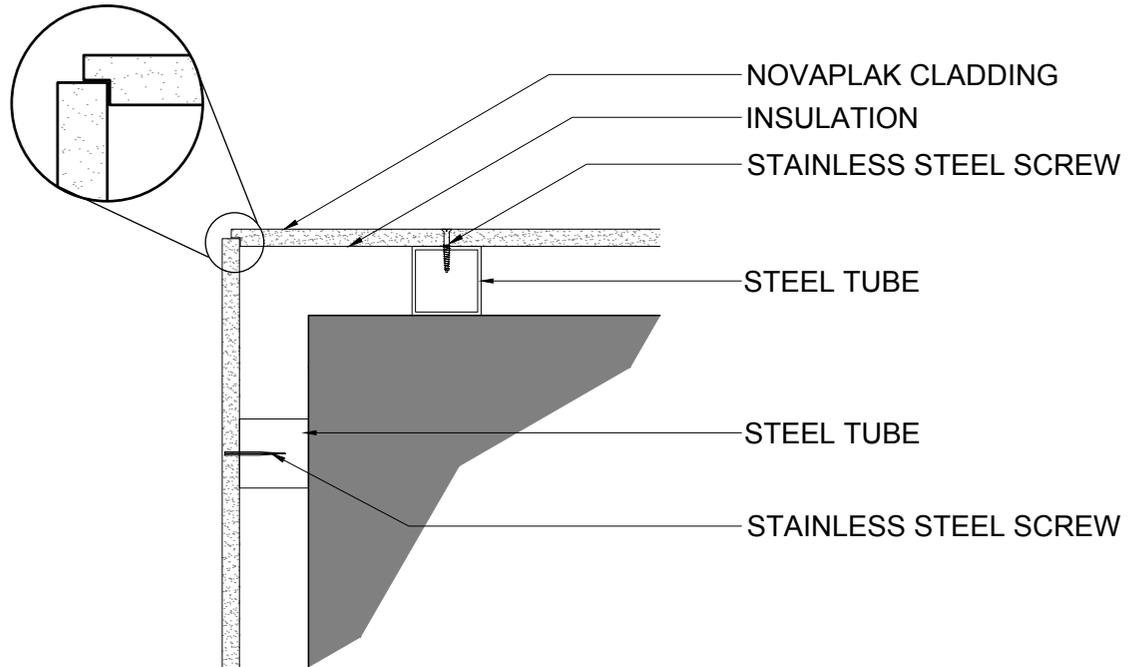
Application Details - ELEVATION CLADDING



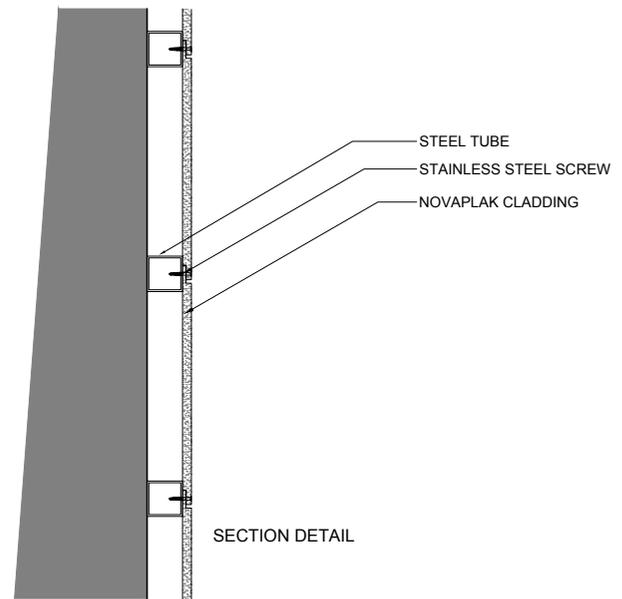
Application Details - **Elevation Cladding** (Thermal bridge elimination)



Application Details - **Corner Detail**

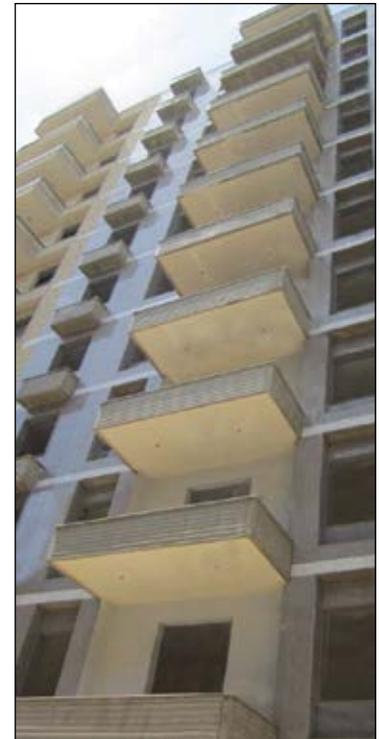
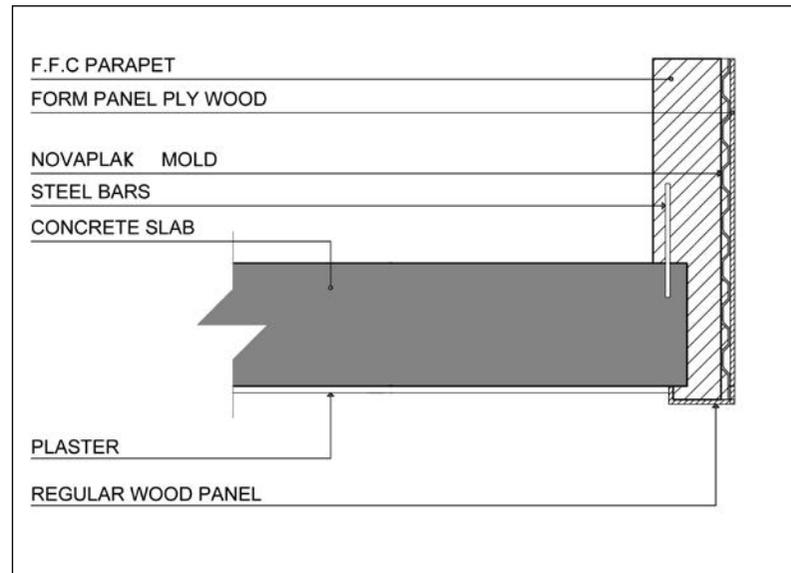


NOVAPLAK PIECE

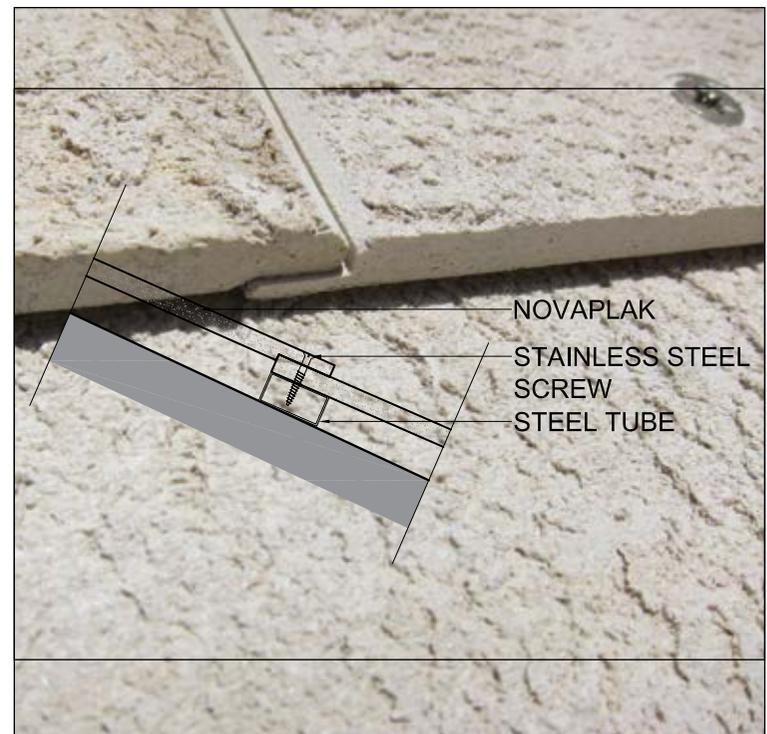
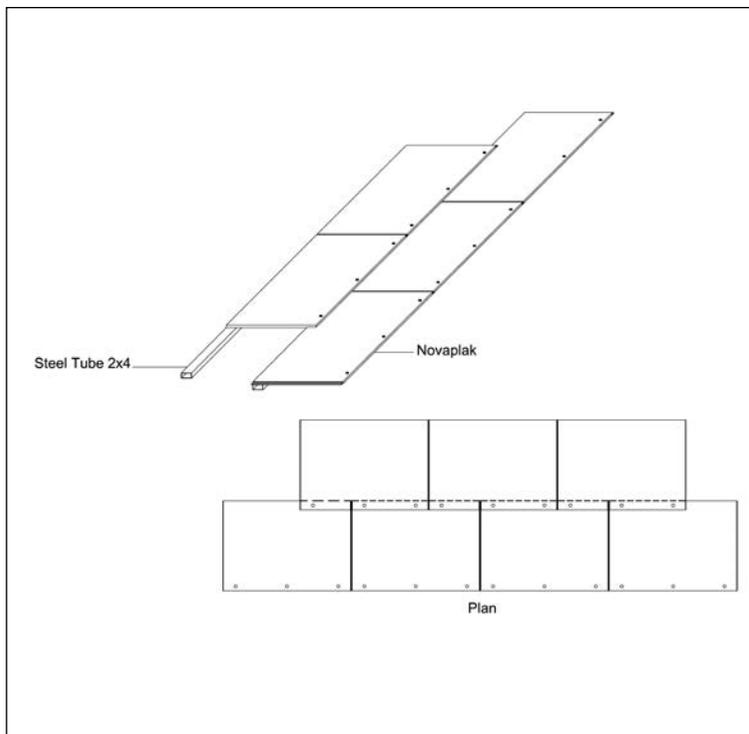
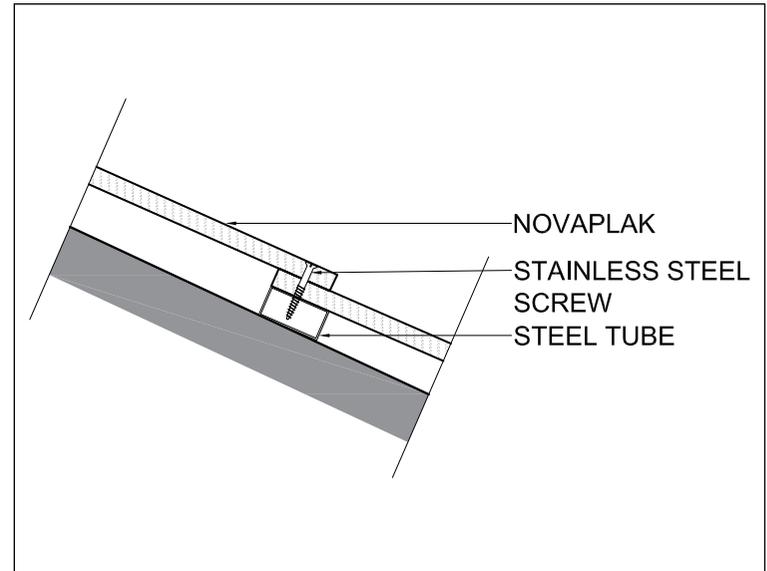
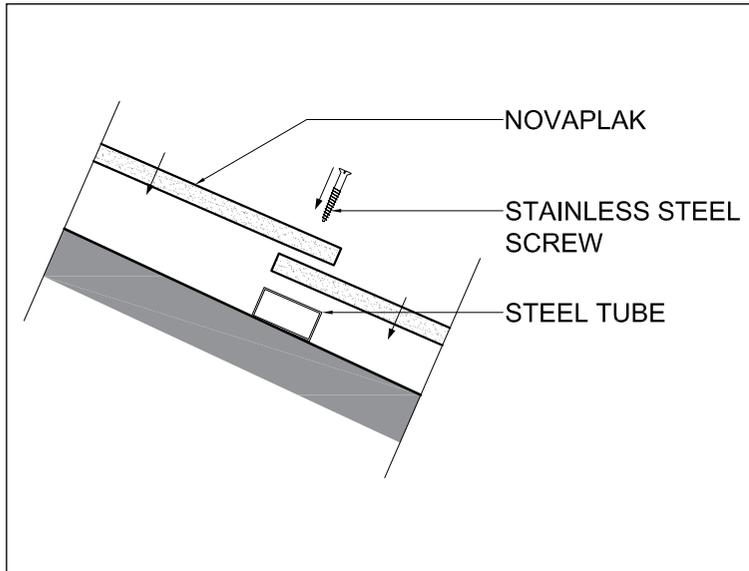


SECTION DETAIL

Application Details - Fairfaced Parappets



Application Details - Roof



Properties

Dimensions

- Width (maximum): 1250 mm
- Length (standard): 3000 mm
- Thickness: from 2.0 to 20 mm (1 mm increment)

*Other dimensions upon special order

FIRE RESISTANCE

Conforms with French classification M1

DIMENSIONAL STABILITY

Coefficient of expansion: 0.01 mm/°C/m

ELECTRICAL RESISTANCE

Ca. 1010 Ohm

WEIGHT

1.5 Kg per square meter / mm

Modulus of Elasticity

3850Mpa

FIRE RETARDANT



MAINTENANCE FREE



VAPOR BARRIER



WATER RESISTANT



SOUND PROOF



PAINT RETAINING



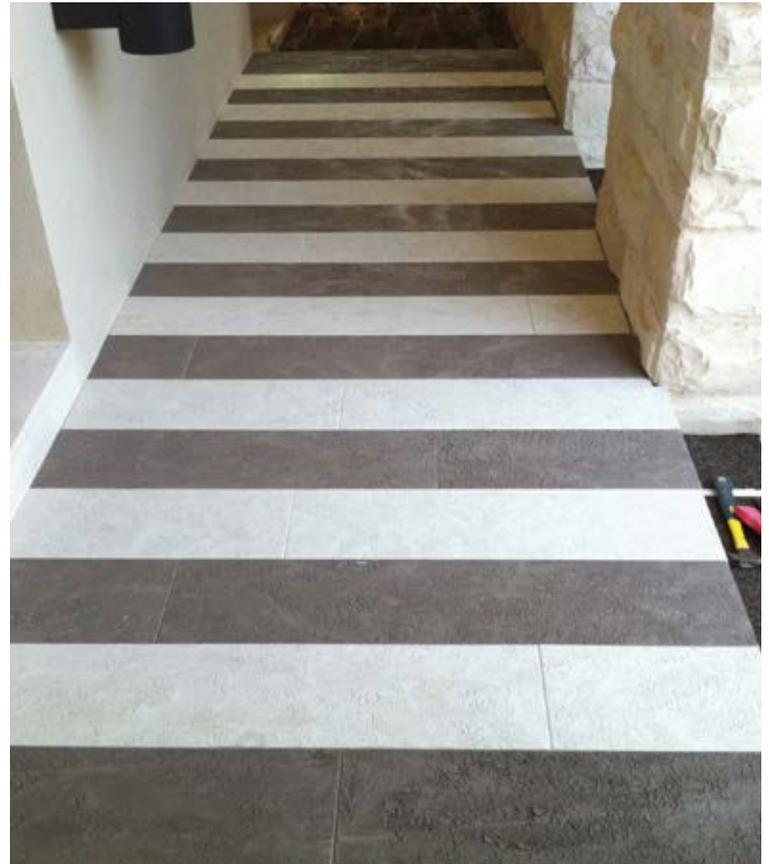
Utilities



No maintenance?? **NOVAPLAK**® remains new when other material looks old



Before **NOVAPLAK**®



After **NOVAPLAK**®



Dirt can be cleaned in few seconds



Plaster when defected



Granite in humid area



NOVAPLAK[®] Resistant to all conditions

Certificates



LNE
Le progrès, une passion à partager.

LABORATOIRE DE TRAPPES
39 avenue Roger Hennequin - 78197 Trappes Cedex
Tél. : 01 30 69 10 00 - Fax : 01 30 69 12 34

Dossier K050468 - Document DE/1 - Page 1/5

**PROCES-VERBAL DE CLASSEMENT
DE REACTION AU FEU D'UN MATERIAU**

prévu à l'article 5 de l'arrêté du 21 novembre 2002

VALABLE 5 ANS à compter du 20 juillet 2009

N° K050468 - DE/1

et annexe de 4 pages

Matériau présenté par : NOVAFLOOR S.A.
ZA Courtimmo
62231 - COQUELLES

Marque commerciale : NOVAPLAQUE

Description sommaire :
Composition globale : Panneau constitué de PVC recyclé et de charges minérale
Application : Habillage de mur extérieur
Masse : (1600 ± 15%) kg/m³
Epaisseur : (5 à 10 ± 10%) mm
Coloris : Gris (clair, moyen, foncé)

Rapport d'essais : N° K050468 - DE/1 du 20 juillet 2009

Nature des essais : Essai(s) par rayonnement.

Classement : **M2**

Durabilité du classement (annexe 22) : NON LIMITEE A PRIORI

compte tenu des critères résultant des essais décrits dans le rapport d'essai N° K050468 - DE/1 an

Ce procès verbal atteste uniquement des caractéristiques de l'échantillon soumis aux essais et caractéristiques de produits similaires.
Il ne constitue pas une certification de produits au sens de l'article L. 115-27 du code de la cons. du 3 juin 1994.

Est seule autorisée la reproduction intégrale soit du présent Procès-verbal de classement qui cc l'intégralité du Procès-Verbal et rapport annexé qui comporte 5 pages.



Page 1/2
Dorbans, le 19 Mars 1998
Dossier n° 98/MPZ.L.16-000.1

**RAPPORT D'ESSAIS MECANQUES
SUR DES EPROUVETTES DE FLEXION**

A la demande de : **Monsieur KAZMA
NOVAFLOOR
Z.A. COURTIMMO
62231 COQUELLES**

Le Laboratoire du Centre Technique du Bois et de l'Aménagement de Bordeaux a procédé à des essais de module d'élasticité apparent en flexion et de résistance à la flexion sur des éprouvettes en PVC monobloc conformément à la norme NF EN 310 de Juin 1993.

1. DESCRIPTIF DES EPROUVETTES

Demandeur : Monsieur KAZMA

Eprouvettes prélevées par le Demandeur

Eprouvettes reçues le : 16/03/98

Référence Laboratoire : 98 16-030 A

Epaisseur nominale en mm : 12

Appellation : PVC monobloc

2. RESULTATS : Le détail de l'ensemble des résultats est donné dans l'annexe 1.

RESULTATS DES ESSAIS DE FLEXION selon NF EN 310		moynenne	écart type
MODULE D'ELASTICITE APPARENT EN FLEXION E_a en N/mm ² (Sans longitudinal)		3620	134
RESISTANCE A LA FLEXION F_a en N/mm ²		44,5	1,6
MODULE D'ELASTICITE APPARENT EN FLEXION E_a en N/mm ² (Sans transversal)		3460	155
RESISTANCE A LA FLEXION F_a en N/mm ²		40,7	2,0

<p>Ce rapport d'essais comporte 2 pages dont :</p> <ul style="list-style-type: none"> - 1 page de texte et résultats. - 1 page d'annexe de résultats. 	<p>La reproduction intégrale de ce rapport d'essais n'est autorisée que sous la forme de fac-similé photographique intégral.</p> <p>Ce rapport d'essais atteste des caractéristiques de l'échantillon soumis aux essais mais ne préjuge pas des caractéristiques de produits similaires. Il ne constitue donc pas un certificat de qualification au sens de la loi de 3 Juin 1994.</p>
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