
Catalogue
www.dofsa.pt
DOF cork
for a greener world

he Cork Cycle

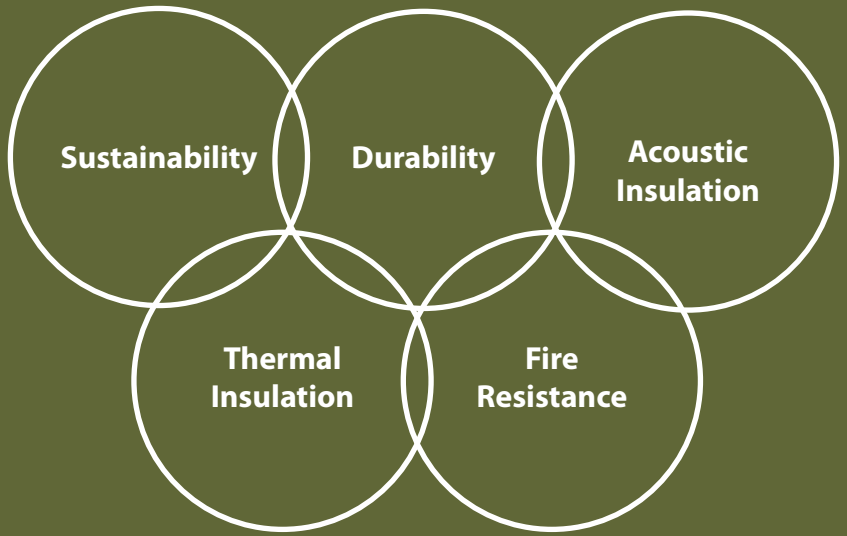
Cork is a renewable resource, extracted from cork oaks every 9 years without any harm to the trees.
Cork oaks (quercus suber) live, mostly, in Western Mediterranean area, where they can reach heights of 25 m and last until they are 300 years old.
Portugal has 735.000 ha cork oak forests (33% of the world's total), capturing 5 million tons of CO_2 every year.
Therefore, using cork for construction also means preserving an ecosystem that is unique in the World.

Nature
Ecosystem
Oak Forest
Ecological

Production
Sustainable
0% waste

Application
Thermal and Acoustics Insulation
Flexible
Healthy and Breathable

Disposal
Reusable
Recyclable



"The best friend on earth of man is the tree. When we use the tree respectfully and economically, we have one of the greatest resources on the earth."

Frank Lloyd Wright

The Products

DOFcork (Dinis Oliveira & Filhos, S.A.) opened in 1987 as a specialized **cork** transformer company. Nowadays, **DOFcork** offers three families of materials to the construction and industry sectors:

cortiPAN CE **corkROLL** **corkGRAN**

DOF cork's green building products serve a wide range of uses:

	Insulation **thermal | acoustics**	**Coating**	**Structure** **Lightweight Concrete**
Exterior **wall | roof**		—	
Interior **wall | floor | ceiling**			

The Factory

After 25 years of process optimization, DOFcork's technology is ever closer to delivering the best of cork.

DOFcork

cortiPAN CE
Overview

Our trademark cortiPAN is the greenest high performance thermal and acoustic insulation solution available in the construction world.

The certification CE - ETA-13/0783 gives to this product a reliable and commercial status that allows greater confidence in its use.

DOFcork's agglomeration system keeps cork's natural features, including its genuine colour and scent.
The fact that the cork cells remain filled with air preserves their elasticity and guarantees almost unlimited durability.

- **Thermal inertia of buildings and relative humidity (HR)**
- **Fire resistance and low gases release**
- **Energy consumption, with reduction of the temperature range**
- **Sound absorption and consequent noise reduction**

cortiPAN
Specifications

98,5 % **corkGRAN** 2 - 14 mm granulometry

+

1,5 % binder [solvent free, urea-formaldehyde free]

=

cortiPAN

Cut	Circular saw or angle grinder
Standard Density *	170 kg/m^3 (± 5 %)
Standard Dimensions *	1000 x 500 mm (± 1 %)
Standard Thickness *	10, 20, 30, 40, 50 and 60 mm (± 1 mm)
Packaging	Plastic-coated Palettes with 120 x 100 cm
Shipment	Container de 20' ≈ 21,5 m^3 Container de 40' ≈ 48 m^3 Truck ≈ 76,5 m^3

* Other features upon request

cortiPAN
Performance

CortiPAN boards have been tested by the National Laboratory of Civil Engineering (LNEC Portugal) and have the European Technical Approval and CE Marking.

		20 mm	60 mm	Standard
Reaction to fire		Euroclass E		EN 11925-2:2002 EN 13501-1 + A1:2009
Thermal Conductivity		0,045 W/m^{o}C	0,049 W/m^{o}C	EN 12667 EN ISO 10456
Thermal Resistence		0,444 m^{2}.^{o}C/W	1,225 m^{2}.^{o}C/W	EN 12667:2001
Sound Absorption α = absorption coefficient	Ground Surface	0,20 (classe E)	0,55 (classe D)	EN ISO 20354 EN ISO 11654
	Moulded Surface	0,15 (classe E)	0,50 (classe D)	

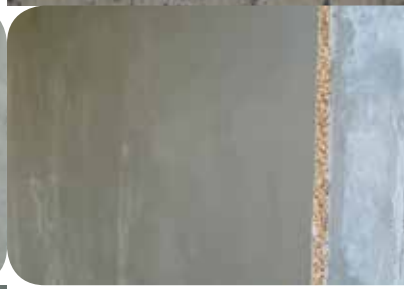
CortiPAN boards have been tested by the National Laboratory of Civil Engineering (LNEC Portugal) and have the European Technical Approval and CE Marking.

Specification	Result	Standard
Water vapour diffusion resistance	$8 \leq \mu \leq 15$	NP EN 12086:1997
Water absorption | kg/m^2	< 2	NP EN 1609:1998
Compressive strenght | kPa	> 180	NP EN 826:1996
Bending resistance | kPa	> 120	NP EN 12089:1997
Dimensional Stability (tests performed to isolated cortiPAN and to cortiPAN in ETICS system)	variation < 0,5% lenght and width; < 1% thickness (temperature conditions and HR* tests: 23/50, 23/85, 40/30, 40/80, 60/50)	NP EN 1603:1998 NP EN 1604 NP EN 13170:2008
Durability	Tendes to infinity	-

* Relative humidity

cortiPAN CE
Exterior Application - ETICS

Good thermal and acoustic insulation.
Excellent fire resistance.



cortiPAN
Exterior Application - ETICS

For the best external thermal and acoustic insulation, **cortiPAN** boards fulfill with the worldwide standards ETICS / EIFS.

With **cortiPAN** boards, DOFcork can supply all the components of the wall insulation system.

Convenience

Total Cost Control

Method of Application:

1 | Cleaning and regularisation of the facade

2 | Spread adhesive mortar on the cork board, on the wall and to fix the board using screws

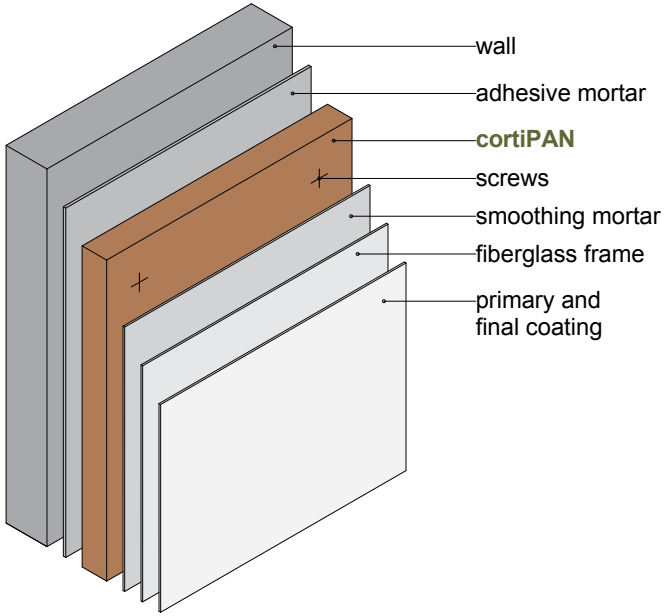
3 | Placement of the boards with compressed joints

4 | Smoothing mortar application

5 | Fiberglass frame placement

6 | Primary application

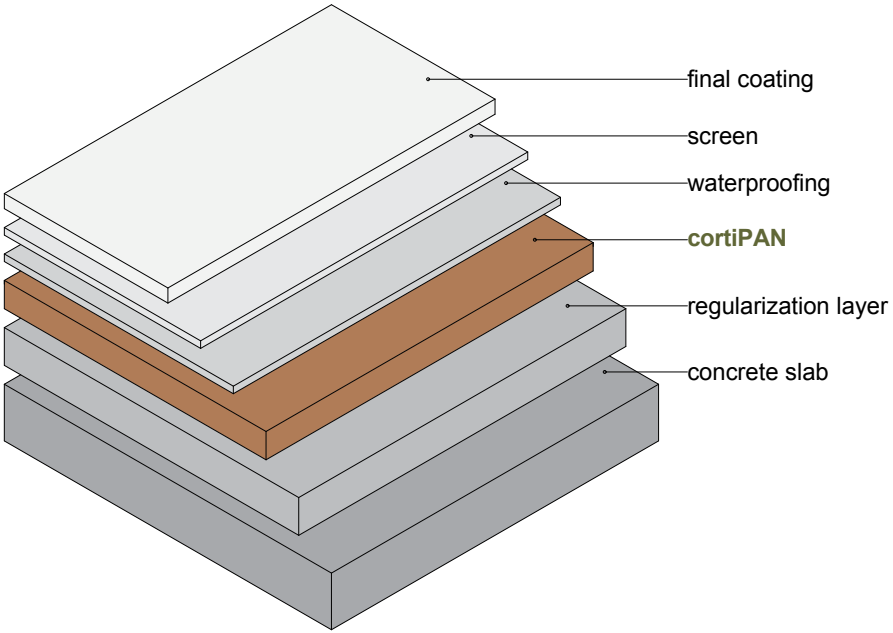
7 | Final coating



ETICS
External Thermal Insulation Composite Systems
EIFS
External Insulation and Finishing System

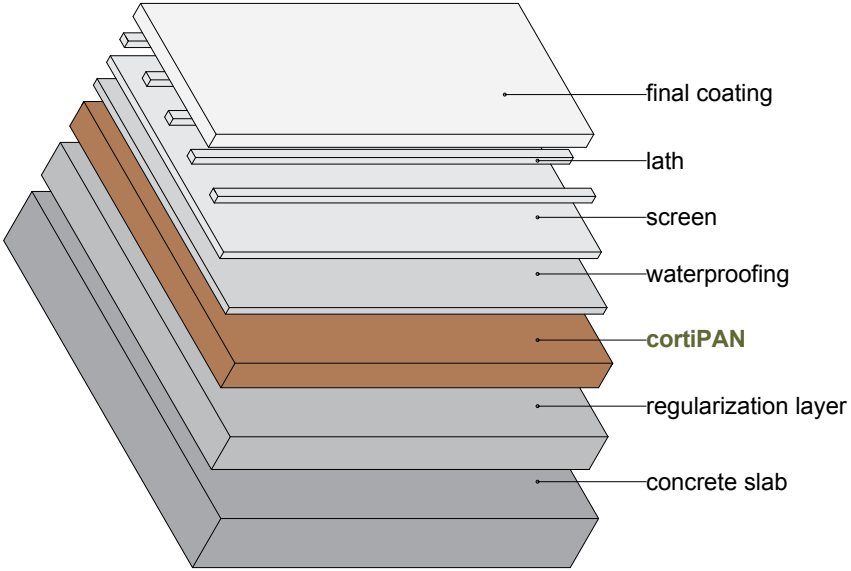
cortiPAN
Exterior Application

Horizontal slab



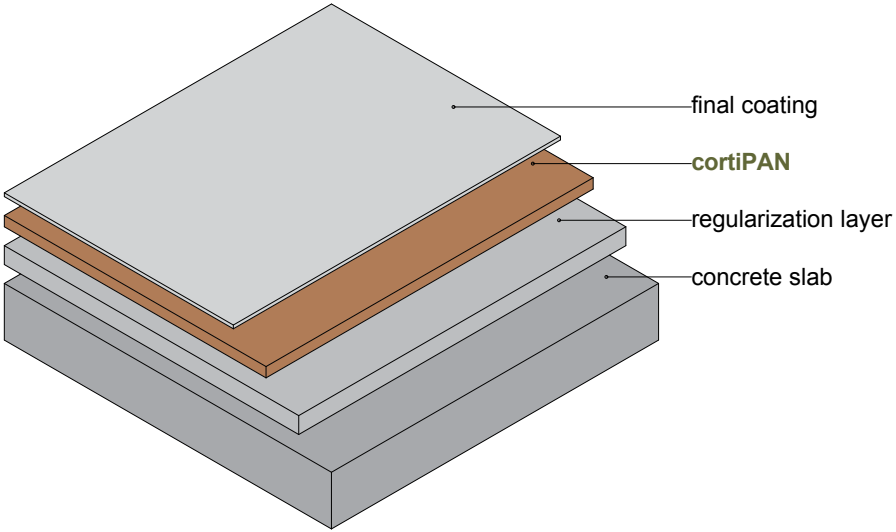
cortiPAN
Exterior Application

Sloped roof



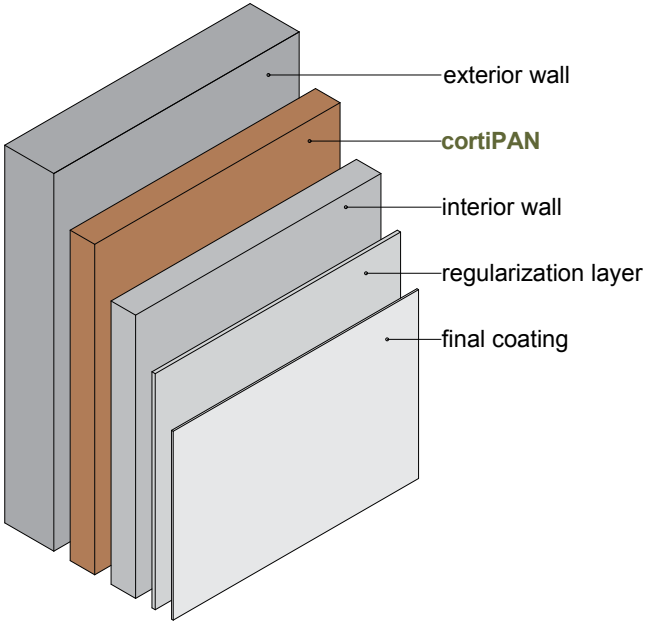
cortiPAN
Interior Application

Between slab and floor



cortiPAN
Interior Application

Between double wall



DOFcork

corkROLL
Presentation

corkROLL is the best alternative for insulation and for interior decoration.

corkROLL is, frequently, used:

- Under wood or ceramic floors
- On walls
  - Under the paint or paper coating or textile
  - As the final surface

- **Natural Look**
- **Usability – bulletin board**
- **Thermal confort**
- **Absorption of impact sounds**

corkROLL
Production

corkROLL is made from the agglomeration of low density corkGRAN with granulometries between 0,5 and 5 mm.

CorkGRAN is mixed with a binder to form a solid cylindrical element → **The cylinder is laminated with thicknesses that range between 2 and 8 mm** → **The roll's stripes are rolled up and packed**

corkROLL
Specifications

91 % **corkGRAN**

\+

9 % binder [solvent free and urea-formaldehyde free]

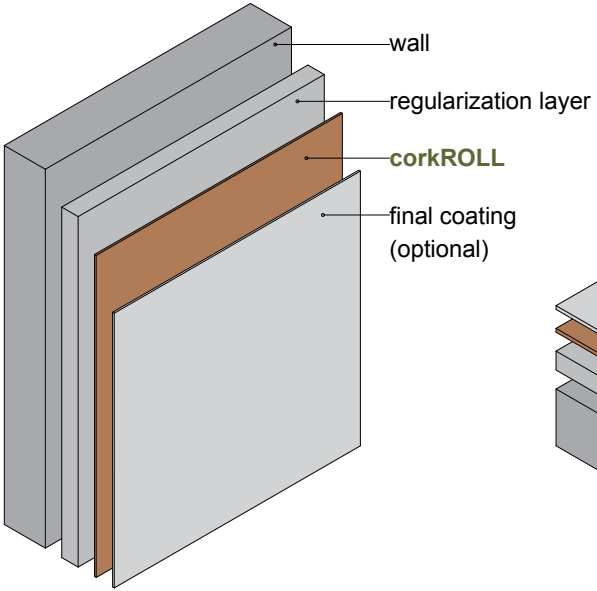
=

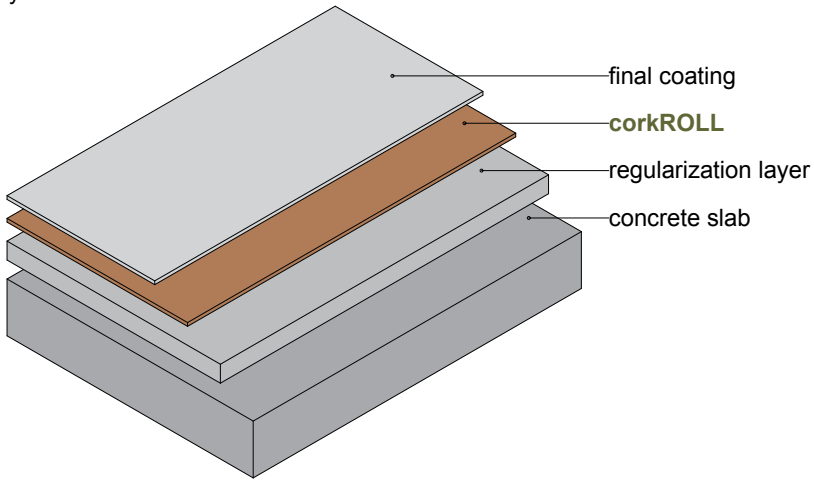
corkROLL

Cut	Cutting tool
Standard density *	200 kg/m^3 - 250 kg/m^3
Standard dimensions *	Width: 1 m | 1,25 m Lengh: 10 - 33,3 m
Standard thicknesses *	2, 3, 4, 5, 6, 8 [mm]

* Other features upon request

CorkROLL can be used between the slab and the floor or in interior walls, giving additional comfort to users.





corkGRAN
Presentation

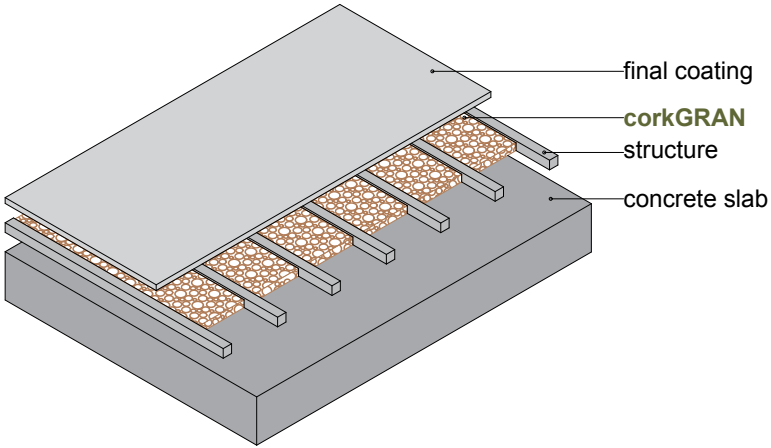
corkGRAN is used for many purposes. Because of its natural properties, corkGRAN is a very versatile product, with different applications in the transformation industry, sustainable construction and synthetic lawns.

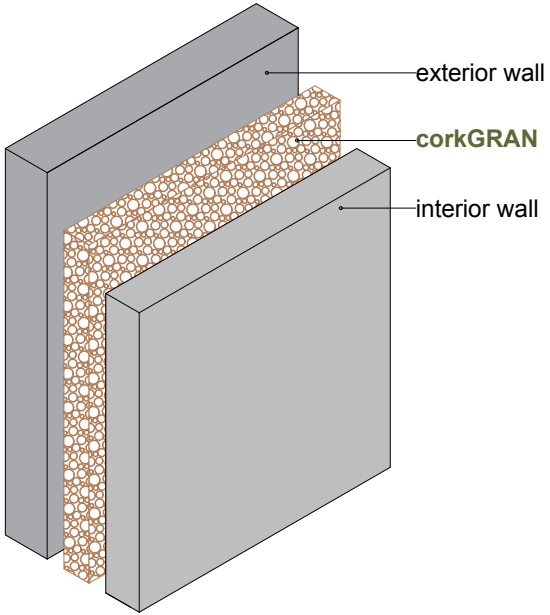
Used to make Lightweight Concrete, **corkGRAN** substitutes, total or partial, the traditional aggregrates.

- ↘ Total weight of structures
- ↗ Acoustic and thermal insulation properties
- ↗ Green nature of the construction
- ↘ Transportation dificulties
- ↗ Solutions durability guarantee
- ↗ Salubrity of solutions

corkGRAN
As Insulation

CorkGRAN can be used, between walls or between the slab and the floor, as a loose element or as insulation.





corkGRAN
Specifications

DOFcork offers differents granulometries and a wide range of densities. Among corkGRAN range, stands out the two more used granulometries in construction:

2 - 5 mm

2 - 14 mm

Composition	100% cork	
Granulometry *	2 - 5 mm	2 - 14 mm
Density *	250 kg/m^3	100 kg/m^3
Packaging	Raffia bags or compressed bales	
Shipment	20' containers ≈ 25 m^3 40' containers ≈ 56 m^3 Truck ≈ 91 m^3	

* DOFcork's granulation capacity allows to offer a range of densities between 50 and 350 kg/m^3, with standard dimensions of 0,5 - 1 | 0,5 - 2 | 1 - 2 | 1 - 3 | 2 - 3 | 2 - 5 | 3 - 7 | 2 - 14 [mm]

The Portuguese Nacional Laboratory of Civil Engineering (LNEC Portugal) tested the following lightweight concrete mixes:

	A	B
Cement		
Sand		
corkGRAN (2 - 14 mm)		

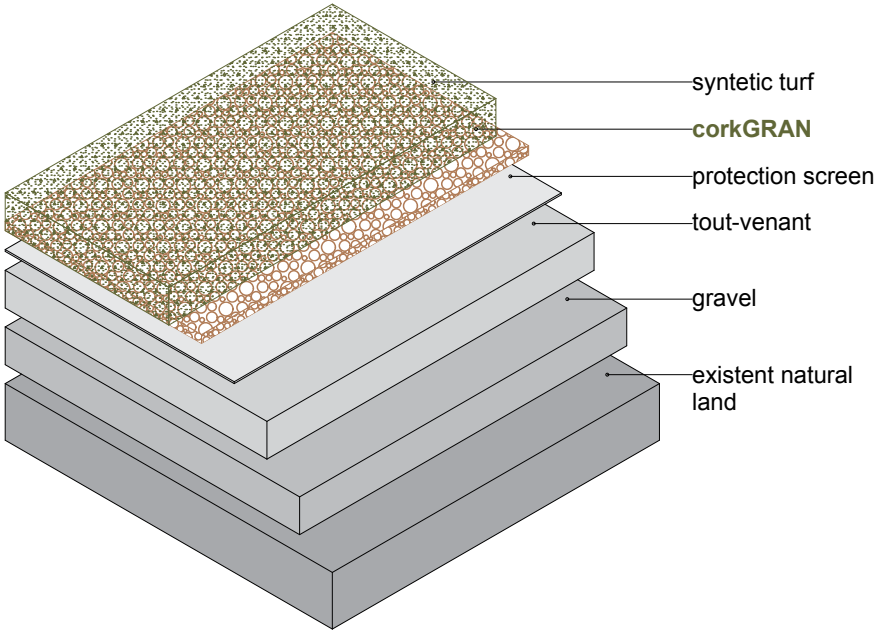
 1 part (volume)

 0,5 part (volume)

	A	B	Standard
Compressive strenght | MPa	0,48	0,95	LNEC E226
Tensile strenght | MPa	0,18	0,54	LNEC E227
Thermal conductivity | W/m. ˚C	0,14	0,17	ISO 8301.1991

CorkGRAN can be used in the construction of syntetic turfs. At the moment, DOFcork is aproaching to this market, through the development of FIFA certificated tests and with our clients colaboration.

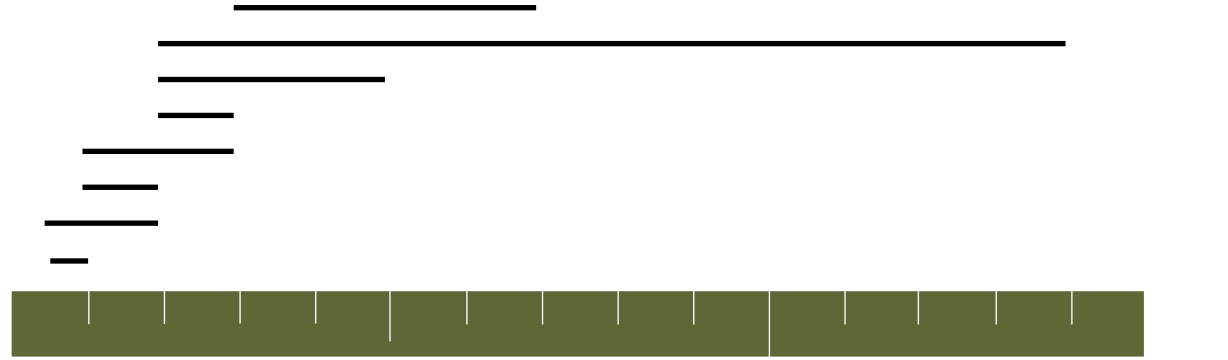
The incorporation of **corkGRAN** in syntetics turfs allows an important reduction of ecological footprint to the final solution.



All **corkGRAN** varieties can be raw material for different industrial products. Nowadays, **corkGRAN** integrate the productive process of industries such as:

decoration sports equipament **wine** eletric components
airplane construction industry automobile industry **ship building**

According to each industry's needs, DOFcork suplies cork granulates with densities that can be between 50 and 350 kg/m^3 and dimensions between 0,2 and 18 mm.



Other features upon request

Green Building Certification

Using cork as a construction material enhances the green content of construction

Cork's versatility allows DOFcork's building materials to achieve credits in different categories of the worldwide recognised standards in green construction.
Here is an applied example to the North American standard LEED (Leadership in Energy and Environmental Design).

DOFcork Materials	LEED Analysis	
	Credit	**Category**
Made with post-industrial recycled material	Environmentally Sustainable	Materials and Resources
Made from the bark of the cork, harvested in periods of nine years	Recyclable Materials	
High R-values obtained	Insulation	Energy and Atmosphere
	Thermal Confort	Indoor Environmental Quality
High acoustic absorption coefficient	Excellent Acoustic Insulation	

Why DOFcork?

DOFcork's range of green materials, for construction and industry, respond to different needs:

cortiPAN CE

It represents the more sustainable solution for thermal and acoustic insulation, in interior and exterior spaces.

corkROLL

It's an excellent solution for interior thermal and acoustic insulation, with good decorative and functional effect.

corkGRAN

In addition to many different industrial applications, corkGRAN can be used both for lightweight concrete or insulation.

Customized and flexible production

Over 25 years of experience and reliability

Innovation through partnerships with clients and universities

Customer focus

DOFcork

DOF019/A

www.dofsa.pt

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