

ECOiso[®] Ecological Acoustic Products

Following an ecological philosophy, JOCAVI® has designed this line of acoustic insulation and treatment materials, which are made exclusively from 100% natural raw-materials, like cork and coconut fibers and wood.

This line of products provides a practical and efficient solution for acoustic insulation and treatment, with the associated benefit of using recycled, recyclable and environmentally-friendly raw materials.

ECOiso[®] line provide it with a high degree of thermal, acoustic and anti-vibration insulation and airborne noise reduction. These products represents the most ecological solutions to build high-quality acoustic insulation and treatment.

The acoustic behavior of this line of products delivers a natural combination, and ensures solutions with superb acoustic performances and an excellent aesthetical and decorative integration.



Following an ecological philosophy, JOCAVI® has designed this product made exclusively of cork from cork oak trees. Its industrial process is 100% natural.

The QUADCORK® is an anti-vibration insulation and acoustic treatment product with a high degree of thermal insulation as well. The outstanding behaviour of the Expanded Cork Agglomerate, in terms of insulation and dimensional elasticity and its controlled porosity and density, delivers excellent acoustic performances to reduce sound levels by structure-born transmission and to reduce airborne noise and reverberation time. The $\mathsf{QUADCORK}^*$ is thus the practical, efficient and ecological solution for a good acoustic insulation and treatment. It is meant to be applied on continuous surfaces or on selected spots. It comes in 25cm x 25cm mosaics that are simply glued to the surfaces, walls and ceilings

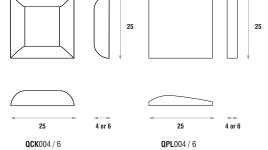
The $\mathsf{QUADCORK}^{\circledast}$ is simply made of cork as its raw-material, without additives..., and is bonded with its own resin. 90% of the energy consumption is made up of biomass, the waste of its industrial process, granules and dust. It is fully reusable.

FEATURES

- Renewable and 100% natural raw-material and fully recyclable.
- NRC: (0.42/m² 40mm) (0.53 /m² 60mm).
- Level of sound insulation: Rw 52 dB.
- Fire resistance: Euroclass E (EN 13501-1 similar to old M4). No release of toxic gases.
- Thermal, acoustic and anti-vibration insulation material.
- Density: 120Kg / m³.
- Thermal conductivity / Specific heat: 0.004W/mk.
- · Natural industrial process (without additives).
- · Unlimited durability, no loss of features.

ABSORPTION COEFFICIENT*

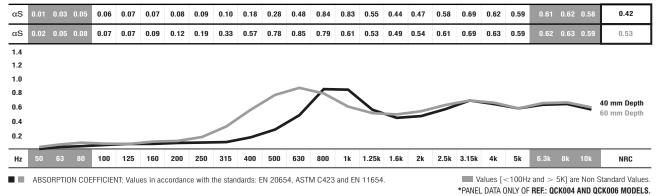
TECHNICAL DRAWINGS



MODELS AND SIZES

MODELS	HEIGHT	WIDTH	DEPTH	WEIGHT
QCK 006	25 cm	25 cm	6 cm	0.5 Kg
QCK 004	25 cm	25 cm	4 cm	0.3 Kg
QPL 006	25 cm	25 cm	6 cm	0.5 Kg
QPL 004	25 cm	25 cm	4 cm	0.3 Kg

SOLD PER BOX ONLY - $1m^2 - 16$ UNITS/TILES = $1 m^2$ 1 BOX OF 4cm units = 4 m^2 - 1 BOX OF 6cm units = 2.5 m^2



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QUADCORK® OUTLINE is an anti-vibration insulation and acoustic treatment product with a high degree of thermal insulation as well. The outstanding behaviour of the Expanded Cork Agglomerate, in terms of insulation and dimensional elasticity and its controlled porosity and density, delivers excellent acoustic performances to reduce sound levels by structure-born transmission and to reduce airborne noise and reverberation time.

QUADCORK® OUTLINE is an efficient and ecological solution for a good acoustic insulation and acoustic treatment.

You can chose from two design options, It is supplied in plates with 100cm x 50cm to be glued on continuous surfaces of walls and ceilings on selected spots.

This is a product made exclusively of cork from cork oak trees his manufacture process is 100% natural.

QUADCORK® is simply made of cork as its raw-material, without additives..., and is bonded with its own resin. 90% of the energy consumption is made up of biomass, the waste of its industrial process, granules and dust. It is fully reusable.

FEATURES

- · Renewable and 100% natural raw-material and fully recyclable.
- NRC: (QOC100 0.70/m²) (QOF100 0.71 /m² 60mm).
- Fire resistance: Euroclass E (EN 13501-1 similar to old M4). No release of toxic gases. • Thermal, acoustic and anti-vibration insulation material.
- Density: 120Kg / m³.
- Thermal conductivity / Specific heat: 0.004W/mk.
- · Natural industrial process (without additives).
- · Unlimited durability, no loss of features.

TECHNICAL DRAWINGS

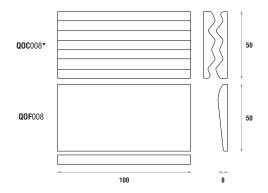


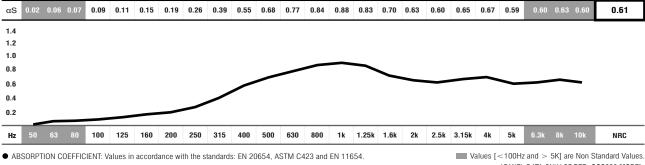
Image of 25x25x6cm model Ref.:QOC008 and QOF008 (on the left) and Ref.:QOC008 models appplied (ambient image)

MODELS AND SIZES

MODELS	HEIGHT	WIDTH	DEPTH	WEIGHT
QOF 008	100 cm	50 cm	8 cm	3.5 Kg
QOC 008*	100 cm	50 cm	8 cm	4.1/3.5 Kg

SOLD IN PAIRS / $m^2 - 2$ UNITS = $1m^2$

ABSORPTION COEFFICIENT*



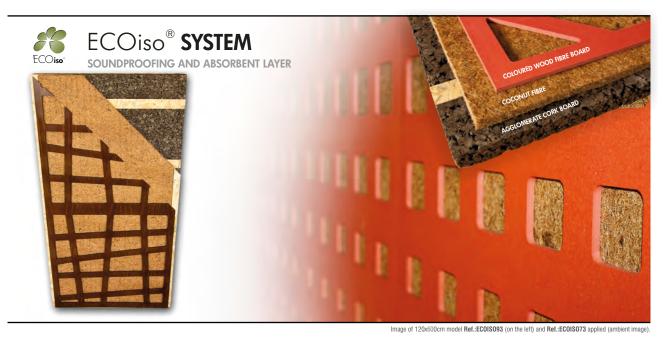
*PANEL DATA ONLY OF REF.: QOC008 MODEL.

STANDARD CORK COLOUR

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 Despite all the standard sizes of all products, this model can be customised upon previous consultation. Sizes may vary slightly due to their production method and some inherent raw-materials characteristics.



Following an ecological philosophy, $\mathsf{JOCAVI}^{\circledast}$ has designed this line of acoustic insulation and treatment materials, which are made exclusively from natural raw-materials, like cork and coconut. This compound, made of strictly 100% natural ecological materials, has an excellent technical performance. The unique features of these raw materials combined in the ECOiso® provide it with a high degree of thermal, acoustic and anti-vibration insulation and airborne noise reduction. This product represents the most practical, efficient and ecological solution to build high-quality acoustic insulation and treatment. The ECOiso® is ideal to install in music and television studios, business spaces, auditoriums, conference rooms, restaurants and bars, etc.

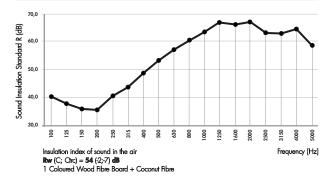
The acoustic behaviour of the ECOiso" (cork + coconut + wood) delivers a natural combination, and ensures solutions with superb acoustic performances to reduce sound levels, as well as an excellent aesthetical and decorative integration.

The ECOiso® system is composed of two types of elements in plates and some accessories. The first element to be applied is the Acoustic Insulation, and the second element is the Acoustic Absorber that gives the final decorative finishing. Accessories are: wooden slats, wall plugs, bolts and glue.

FEATURES

- · Renewable, 100% natural raw-material and fully recyclable.
- Noise reduction coefficient (NRC): 0.78/m²
 Level of sound insulation: Rw 54 dB.
- · Fire-resistance: Wood Veneer Faced (or Engineered Coloured Fibre) Boards Euroclass B-s2,d0 (similar to old M1), Coconut (Coir Fibre) - Euroclass E (similar to old M4) and Cork Euroclass E (similar to old M4).
- Thermal. acoustic insulation. anti-vibration and acoustic absorbent.
- · Unlimited durability, no loss of features.
- · Excellent dimensional stability (even when subject to high thermal variations).
- Low energy consumption during the manufacturing process.

SOUND INSULATION INDEX R (dB)



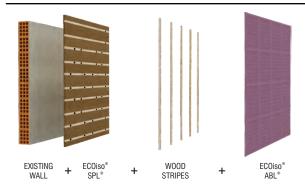
ENGINEERED COLOURED WOOD COLOURS

YELLOW	ORANGE	RED	PURPLE	GREEN	BLUE	BROWN	BLACK	GREY	

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TECHNICAL DRAWINGS



MODELS AND SIZES

MODELS	HEIGHT	WIDTH	DEPTH	WEIGHT
ECOIS093	120 cm	60 cm	9.3 cm	13.6 Kg
ECOIS073	120 cm	60 cm	7.3 cm	12.6 Kg

THERMAL TRANSMISSION COEFFICIENT)

LAYERS	λ [W/m.°C]	e [m]	R [m².C/W]
Rse			0,040
traditional plaster	1,30	0,015	0,012
brick 22 Preceram	-	0,220	0,580
traditional plaster	1,30	0,015	0,012
ECO iso board	0,04	0,040	1,500
ADD or LFM finishing board	0,25	0,0125	0,050
Rsi			0,130

Thermal transmission coefficient $U = 0,430 \text{ W/m}^2.^{\circ}C$ (without insulation $U = 1,294 \text{ W/m}^2.^{\circ}C$

WOOD VENEER FINISHINGS





The ECOiso®ABL® is ideal to install in auditoriums, conference rooms, business spaces, restaurants and bars, etc.. The coconut fibre is a natural, renewable and very light vegetal material. It has high porosity (95% of pores), which translates into an extremely high absorption of sound energy. The good behaviour of the recycled wood fibres, associated with the coconut fibre's micro-porous absorbent properties, makes a natural first-class combination in terms of acoustic solutions.

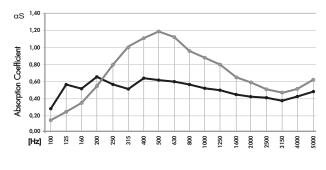
The acoustic behaviour of the $\mathsf{ECOiso}^{\otimes}\mathsf{ABL}^{\otimes}$ (coconut + wood) delivers a natural combination, and ensures solutions with superb acoustic performances to reduce airborne levels, as well as an excellent aesthetical and decorative integration.

The ECOiso®ABL® is composed of two materials (coconut fibres and recycled wood fibres) forming the Acoustic Absorber element, that gives us the final decorative finishing.

FEATURES

- 100% natural materials.
- · 100% recycled and recyclable.
- Noise reduction coefficient (NRC): 0.78/m²
- Fire-resistance: Wood Veneer Faced (or Engineered Coloured Fibre) Boards Euroclass B-s2,d0 (similar to old M1), Coconut (Coir Fibre) Euroclass E (similar to old M4).
- · Unlimited durability, no loss of features.
- · Excellent dimensional stability
- (even when subject to high thermal variations).
- · Low energy consumption during the manufacturing process.

ABSORPTION COEFFICIENT



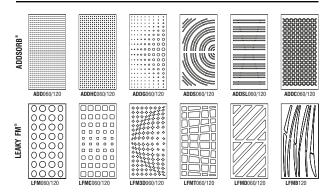
ABSORPTION COEFFICIENT: Values in accordance with the standards, EN 20654, ASTM C423 and EN 11654.

ADDSORB LINE • LEAKY FM LINE

ENGINEERED COLOURED WOOD COLOURS



Image of 120x60cm model Ref.:ECOABLw (on the left) and Ref.:ECOABLw applied (ambient image) LFMT120 perforation on both images **TECHNICAL DRAWINGS**



MODELS AND SIZES

MODELS	HEIGHT	WIDTH	DEPTH	WEIGHT
ECO ABLc	120 cm	60 cm	2.8 cm	4.1 Kg
ECO ABLw	120 cm	60 cm	2.8 cm	4.1 Kg

ABSORPTION COEFFICIENTS OF ALL MODELS (NRC) AND FINISHING PANELS PERFORATIONS (%/m²)

ADDSORB [®] REFERENCE AND SIZES AVAILABLE	PERFORATIONS (%/m²)	NRC	LEAKY FM [®] REFERENCE AND SIZES AVAILABLE	PERFORATIONS (%/m ²)	NRC
ADD 060/120	6,30%	0,53	LFM 060/120	43,09%	0,82
ADDHC 060/120	10,22%	0,63	LFMC 060/120	32,45%	0,77
ADDG 060/120	9,26%	0,59	LFM3D 060/120	18,40%	0,72
ADDS 060/120	24,61%	0,74	LFMT 060/120	72,57%	0,90
ADDSL 060/120	25,54%	0,74	LFMD 060/120	71,26%	0,90
ADDC 060/120	28,78%	0,76	LFMB 060	38,35%	0,80

WOOD VENEER FINISHINGS



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 -Wood and Fabric products are highly susceptible to change its appearance with humidity and temperature. Close attainton must be paid to the storage conditions and the acclimatization before, during and after the installation.
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COiso[®] ABL

ABSORBENT LAYER



It is definitely the oldest and noblest raw material used for Acoustic and Thermal Insulation. Cork, a 100% natural product, is par excellence the best material for soundprofing.

This agglomerate is made of selected raw material originating from self-sustainable cork-oak stands, which are more than 100 years old, in the Portuguese territory. The process to manufacture the agglomerate only uses cork and steam, no other additives. The density is controlled at 110kg/m³.

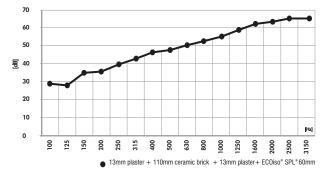
It comes in 1000 x 500mm plates and its thickness varies between 20 and 100mm. It may be placed on the inner layers of walls, ceilings or floors or may be placed on the outer laver as a final finishing.

This material is simply beautiful, exotic and very attractive and it may certainly make the difference in your space. Control noise like never before!

FEATURES

- •100% Cork and Natural Material
- •110 Kg/m³ Density.
- Fire-resistance: single product Euroclass E (similar to old M4) and ETICS system Euroclass B-s1,d0 (similar to old M1).
- Unlimited durability.
- Excellent Thermal Properties.
- Excellent anti-vibration properties
- Aplicable on ceilings, floors and walls.
- Aplicable as revetment or as insulation material.
- Plate sizes: 1000x500mm; thickness, 10/20/40/60/80/100mm.

SOUND INSULATION INDEX (dB/Hz)



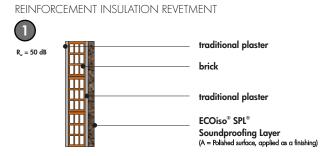
INSULATION AND THERMAL RESISTANCE VALUES

	INSULATION VALUES R_ ⁽¹⁾	THERMAL RESISTANCE R ₇ (m ² .°C/W)
20mm ECOiso [®] SPL [®]	$R_w = 39 \text{ dB}$	0,50
40mm ECOiso® SPL®	$R_w = 44 \text{ dB}$	1,00
60mm ECOiso [®] SPL [®]	$R_w = 50 \text{ dB}$	1,50
80mm ECOiso [®] SPL [®]	$R_w = 52 \text{ dB}$	2,00
100mm ECOiso® SPL®	$R_w = 54 \text{ dB}$	2,50

IMPORTANT NOTICES

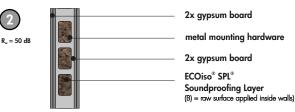
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APPLICATION EXAMPLES



13mm plaster + 110mm ceramic brick + 13mm plaster + ECOiso® SPL®60mm

INSIDE A PARTITION WALL



2x13mm gypsum board + ECOiso® SPL®60mm on metal frame + 2x13mm gypsum board

GENERAL FEATURES

TECHNICAL FEATURES	STANDARD	LIMIT VALUES / TOLERANCES	CLASS
Apparent bulk density	NP EN 1602	< 130 kg/m³	
Thermal conductivity coefficient	EN 12667	$<$ 0,040 W/m.K ($\lambda_{\rm o}$)	
Water content	EN 12105	< 8%	
Water absorption	NP EN 1609	< 0,5 kg/m²	WS
Fire Class	NP ISO 11925-1	< 150 mm (h)	Euroclass E
Fire Class	ETICS		B - s1,d0

INSULATION AND THERMAL RESISTANCE VALUES

2		THERMAL RESISTANCE R _r (m ² .°C/W)
40mm ECOiso [®] SPL [®]	$R_w = 44 \text{ dB}$	1,00
60mm ECOiso® SPL®	R _* = 50 dB	1,50
80mm ECOiso [®] SPL [®]	R _* = 53 dB	2,00
100mm ECOiso® SPL®	R _w = 56 dB	2,50

(1) Laboratory Measurement of Sound Absorption Coefficient according to ISO 140-3 and ISO 354:2003



ECOiso®NCF® is a sound insulation material composed by one sheet of Cork Agglomerate and one board of high-density recycled wood fibers. This material was thought in order to reduce transmission of sound and vibration in the floors of residential and commercial buildings. It can also be used on walls and ceilings.

The strength and durability added to the available dimensions of the ECOiso®NCF® make it ideally suitable for primary construction or retrofitting of existing applications. There is arequirement for a sound isolation material that should be as thin as possible, in order to maximize the usable room areas.

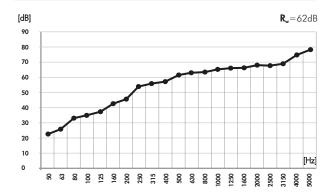
Beforetime the use of cork and wood agglomerates was one of earliest methods for building studios soundproofing insulation. It was soon discovered that these same excellent characteristics so essential in recording studios, could be applied equally well to home theatres, home studios, music rooms and many others.

ECOiso®NCF® has also proven effective over a wide sound frequencies range, giving the best noise reduction values at the low and high-frequencies in a single composite material.

FEATURES

- 100% Recyclable and Natural raw-materials.
- · Recycled raw-materials.
- · Fire-resistance: OSB Euroclass D-s1,d0 (similar to old M3) and Cork - Euroclass E (similar to old M4).
- · Supplied in tiles, easy to install.
- Excellent anti-vibrate performance.
- Easily cut to adjust to room dimensions.
- Provided in two sizes: 48 X 48 cm or 96 X 48 cm.
- Suitable for primary construction or retrofitting.

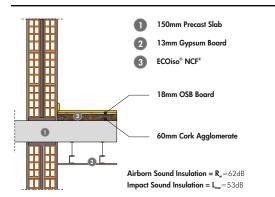
AIRBORN SOUND INSULATION (dB/Hz)



PACKAGE INFORMATION of 48 x 48 cm tiles

REFERENCE	PACKAGE DIMENSIONS	NR. OF TILES PER BOX
ECOiso® NCF486 - 60mm	1 Box - 62 x 62 x 36 cm	6 tiles (2,88m²)
ECOiso® NCF488 - 80mm	1 Box - 62 x 62 x 36 cm	4 tiles (1,92m²)

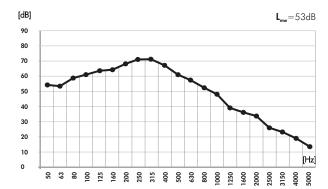
APPLICATION EXAMPLE



MODELS AND SIZES

MODELS	HEIGHT	WIDTH	DEPTH	WEIGHT
ECONCF968	96 cm	48 cm	8 cm	8.2 Kg
ECONCF966	96 cm	48 cm	6 cm	7.4 Kg
ECONCF488	48 cm	48 cm	8 cm	4.1 Kg
ECONCF486	48 cm	48 cm	6 cm	3.7 Kg

IMPACT SOUND INSULATION (dB/Hz)



PACKAGE INFORMATION of 96 x 48 cm tiles

REFERENCE	PACKAGE DIMENSIONS	NR. OF TILES PER BOX
ECOiso® NCF966 - 60mm	1 Box - 120 x 62 x 36 cm	6 tiles (5,76m²)
ECOiso® NCF968 - 80mm	1 Box - 120 x 62 x 36 cm	4 tiles (3,84m²)

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NOISE CONTROL FLOOR

SOME WORLDWIDE WORKS



Rehearsal Rooms



Acoustic Shells



Recording Studios





Night Clubs



Radio Stations



Auditoriums

Health Clubs



Home Theatre / Cinema



Class Rooms



Restaurants



Anechoic Chambers



Food Courts



Mastering Studios



JOCA VI, Acoustic Panels, Ltd. Av. Pedro Álvares Cabral Centro Empresarial Sintra - Estoril V, Armazém B18 2710 - 297 Sintra - Portugal Phone +351 21 9 243097 - F ax +3 51 21 9 243098 www.jocavi.net - e-mail: info@jocavi.net www.facebook.com/jocavi.net http://www.youtube.com/user/jocavigroup