



DECHO® The sound-absorbing panel Made in Italy

Decho® has been the first acoustic panel totally made of synthetic materials, and today it represents one of the most popular sound absorbing panels for the acoustic treatment and reverb reduction of spaces.

Decho® is a high performing sound absorber, but a design furniture element as well, easy to install, resistant and durable. Due to its simple and regular design, this panel can be easily installed in any architectural environment, adding its own aesthetic value.

Decho® line offers a wide range of solutions in terms of shapes, dimensions, colours and customized printed versions. Thanks to this flexibility, designers can propose infinite composite solutions to their clients for standard wall or ceiling installation, and for customized acoustic furniture or surface covering as well.

Decho® panels can be printed with any HD digital image, directly provided by the customer or taken from common online photo archives, where it's possible to choose among millions of HD images organized by items (landscapes, celebrities, abstract drawings, etc.). **Decho®** printed version is commonly used for decorative wall installations in living spaces, offices, schools and many others: this is the perfect solution to combine aesthetics and acoustics.



SYSTEMS AND MATERIALS FOR ACOUSTIC COMFORT

ACUSTICO® Registered Trademark of Spandre S.r.l. – Zona industriale Via V. dell'Ipca 2 - 10070 San Carlo (TO) - Italy

VAT N. 10775380016 - Tel.: +39 011 920 6093 - Fax: +39 011 920 2545 - Mail: info@acustico.com

WWW.ACUSTICO.COM

CONSTRUCTION SYSTEM

The construction system of Decho® panels consists of an internal slab made of polyester fibre (fireproof thermo-bonded and smoothed PET) and an internal perimetral frame made of thermoplastic polymers (or extruded aluminium for large formats).



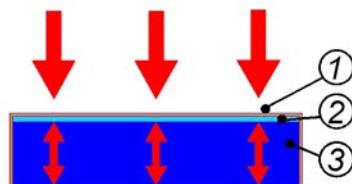
The surface covering is a robust two-way stretch fabric made of fireproof polyester, available in a wide variety of textures and colours. It can also be customized with any HD digital printing, especially in the wall version named "acoustic framework".

OPERATING PRINCIPLES

The acoustic operating principle of Decho® panels is based on the concept of the "sound absorption by porosity", associated to the concept of the "vibrating membrane". This particular feature of Decho® sound absorbers, obtained thanks to a process of surface thermo-smoothing of the polyester fibre, extends the panel's performances even at low frequencies, where common sound-absorbing panels cannot be so much efficient.

The acoustic benefit is higher because of the capacity of the polyester fibre to dissipate the sound energy, through the vibrations and the rubbing of its filaments.

The scheme above describes the different layers of the panel and it explains the acoustic operating principle through red arrows, that represent the sound waves.



1 - Fabric covering
2 - Polyester membrane density 100 Kg/m²
3 - Polyester core density 45-50 Kg/m²

SHAPES, DIMENSIONS AND COLOURS

Decho® panels have many standard shapes and dimensions (or may be customized), about 200 colours and 8 types of textures.



Standard thickness: 45 mm (other thicknesses available on request)

Approximate weight: 4 Kg/mq

Standard dimensions (square and rectangle) in mm:

400 x 1200 - 600 x 600 - 600 x 1200 - 600 x 2000 - 800 x 800

1000 x 1000 - 1200 x 1200 - 1000 x 2000 - 1200 x 2000 - 1200 x 2400

Other shapes and dimensions available on request.

TECHNICAL SPECIFICATIONS AND CERTIFICATIONS

Decho® panel is fireproof certified in the assembled version in **Class 1** (UNI 9177) and any construction element meets the requirements of fire resistance and toxicity.

INTERNAL PET POLYESTER FIBRE

Composition:

100% Polyester fibre

Non-hazardous substance D.M. 12/02/93.

Fire resistance:

UNI EN 13501-1:2009 Euroclass B-s2,d0

Emits no opaque or toxic fumes (ANFOR F1 16-101).

General features:

Resistant to chemical agents (acids, salts, hydrocarbons), microorganisms and bacteria, odour-free, water repellent, does not decay or absorb fumes and smells.

PERIMETRAL STRUCTURAL FRAME

Extruded aluminium (large formats)

Fireproof plastic polymers Class 1 UNI 9177

Decho® panels don't contain vitreous fibres, glass wool or rock wool, nor formaldehyde. Moreover, there is no possibility to disperse any fibre or inhalable dust in the environment.

POLYESTER FABRIC COVERING

Fire reaction:

Italy - Class 1

UNI EN 13501-1:2009 Euroclass B-s1,d0

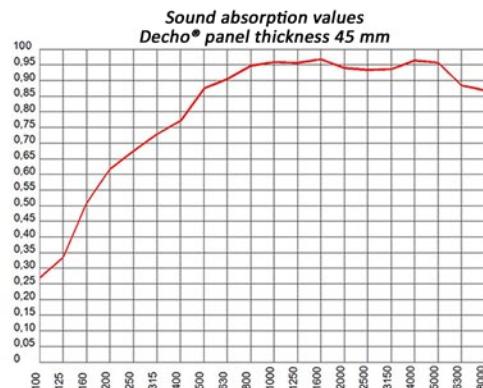
Oeko-Tex® Standard 100 - Class 1

Abrasion resistance (Martindale):

UNI EN ISO 12947:2000 100.000 cycles \pm 20%

Lightfastness (Xenotest):

UNI EN ISO 105 B02 5 \pm 1



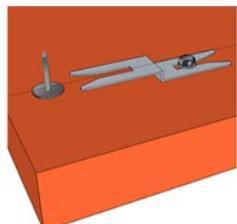
INSTALLATION

Decho® panels may be installed on wall or to the ceiling, with the following fixing systems.

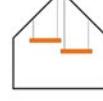
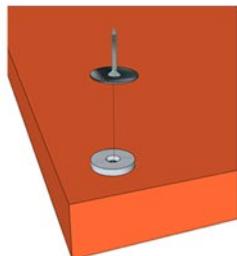
Ceiling installation



ADHERENT TO THE CEILING WITH MECHANIC SYSTEM



ADHERENT TO THE CEILING WITH MAGNETIC SYSTEM



SUSPENDED TO THE CEILING WITH CABLES



AESTHETIC ACCESSORY MADE OF CHROMED STEEL FOR CEILING INSTALLATION AVAILABLE ON REQUEST

Wall installation



INSTALLED ON THE WALL AS "ACOUSTIC FRAMEWORK"



3D WALL COMPOSITIONS WITH MAGNETS AND SPACERS

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