

Technical Data Sheet

PET ACOUSTIC PANELS AND PRODUCTS



Description

eKōR Acoustic PET Acoustic Panels and Products are extremely resistant, light and soft to the touch. Composition consists on 100% PET fibers, of which 60% are recycled (repurposed from plastic bottles). **eKōR Products are 100% recyclable and naturally fire resistant.**



With sustainability as a primary goal, this earth-focussed product is a front performer for its manufacturing process, utilizing discarded plastic products in a health conscious and aesthetically versatile acoustic product line, that ensures a sustainable earth centric future.



Applications for this versatile product, include walls, ceilings, workplace dividers, light shades, hanging partitions and a wide and ever expanding range of other acoustic solutions. Simply put, this material is the leading choice for acoustic treatment internationally for, easily meeting aesthetic, healthy and environmental targets for conscious design.

eKōR is highly customizable. With an understanding that each design is unique, eKōR Acoustic Panels and Products are not intended to be an off the shelf, “one size fits all” solution. There is a need for an on-site spatial evaluation to understand the values needed within any given space and subsequent customizable solution to meet specific requirements. eKōR is easily adjustable to a wide range of forms, and styles, while maintaining its high performance acoustic absorption properties in each and every space. This natural flexibility in design is what makes eKōR products such an appealing choice for today’s innovative evolving design concepts.

eKōR can be fully customized, fabricated and colored as requested by our customers. Explore the wide selection of current designs intended to meet your needs, or work with one of our product specialists to craft a solution unique to your vision.

Technical Specifications

- **Composition:** 100% PET polyester (60% recycled PET fiber + 40% virgin PET fiber)
- **Size:** 96" x 48" ($\pm 1"$)
- **Fire proof certifications:**
 - ASTM E84 CLASS A ○ EN 13501 CLASS B-s1,d0
- **Environmental Certifications:** OEKO-TEX® STANDARD 100 (tested for harmful substances)
- **MSDS:** Material Safety Data Sheet (annex)
- **Technical data:**

Thickness (mm, $\pm 5\%$)	9mm (3/8")	12mm (1/2")
Size (in, ± 1 in)	96 x 48	96 x 48
Weight (lb/sheet)	12.46	15.74
Density (lb/m ²)	4.19	5.29

Features

- Free from formaldehydes
- Free from chemical irritants
- 60% recycled / 100% recyclable
- Easy maintenance: resistant to dirt and dust
- Free from odors
- Resistant to impact
- Easy to handle
- Thermic isolation
- Easy to clean - Air Pressure (vacuum or air compression or soap/water)

Environment

eKÖR PET Acoustic Panels are produced out of 60% recycled polyester fibers (obtained from PET bottles). Waste and residue generated from this production process are also reused or recycled whenever possible.

The panels are tested for the presence of harmful substances and do not contain formaldehyde binders. Polyester fibers also allow for a cleaner interior environment and have proven not to become air pollutants.

Fire retardant properties are permanent and inherent to the FR fibers. The panels do NOT undergo any chemical FR treatment, as this is unnecessary.

Deterioration and Humidity

eKÖR PET Panels are extremely durable and easily cleaned and maintained, so no specific care is required. The panels do not contain any organic compounds, so are not subject to deterioration over time. In addition to this, eKÖR is not susceptible to development of mold or mildew due to its very low humidity absorption.

Surface pattern

Non-woven - Panels do not have any pattern or direction. There may be a small thickness, mesh and color variation, as well as superficial spots, which are inevitable and inherent to PET fibers. Batch to batch color variation may occur due to different color mixture, origin and nature of the recycled fibers during different production runs. Color variation is to be expected and as such, it is recommended that control samples be requested when you are finalizing your project details.

Acoustic Performance

The following table features Noise Reduction Coefficient (NRC) of the PET Acoustic Panels according to standard ISO 354:2003 in reverberation room. Translation (Absorption = 40-70% in restricted environments and up to 125% with dense design and trapped air cavity at installation.

Thickness (mm/in)	12 / 1/2"
NRC (Single Layer PET Panel)	0.45
NRC (PET Panel with air trapped behind panel @ 1/2")	0.75
NRC (PET Panel with dense configuration & air trap)	1.25

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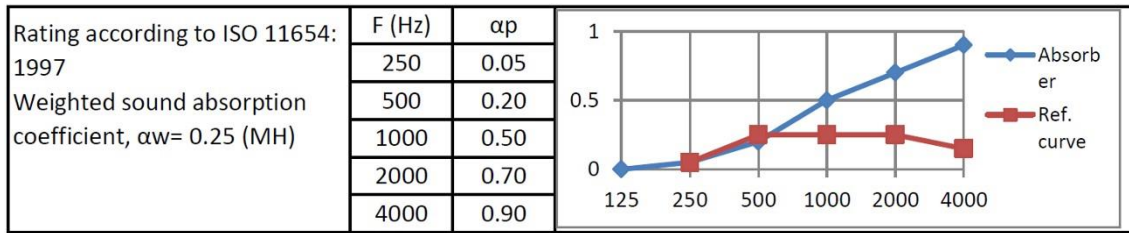
Test Method: ISO 354:2003

According to ISO 11654:1997, PET Acoustic Panels features the following Weighted Acoustic Absorption Coefficient (α_w):

Thickness (mm)	12 (1/2")
α_w	0.25 - 0.55

Test Method: ISO 11654:1997

Graphic description of α_w in reverberation room:



Test Method: ISO 11654:1997

Please note the noise decrease in a reverberation testing room, shown by comparison between reference values (Ref. curve) and test values by using a single layer of PET Acoustic Panel (Absorber curve), with special highlight to medium and high frequencies.

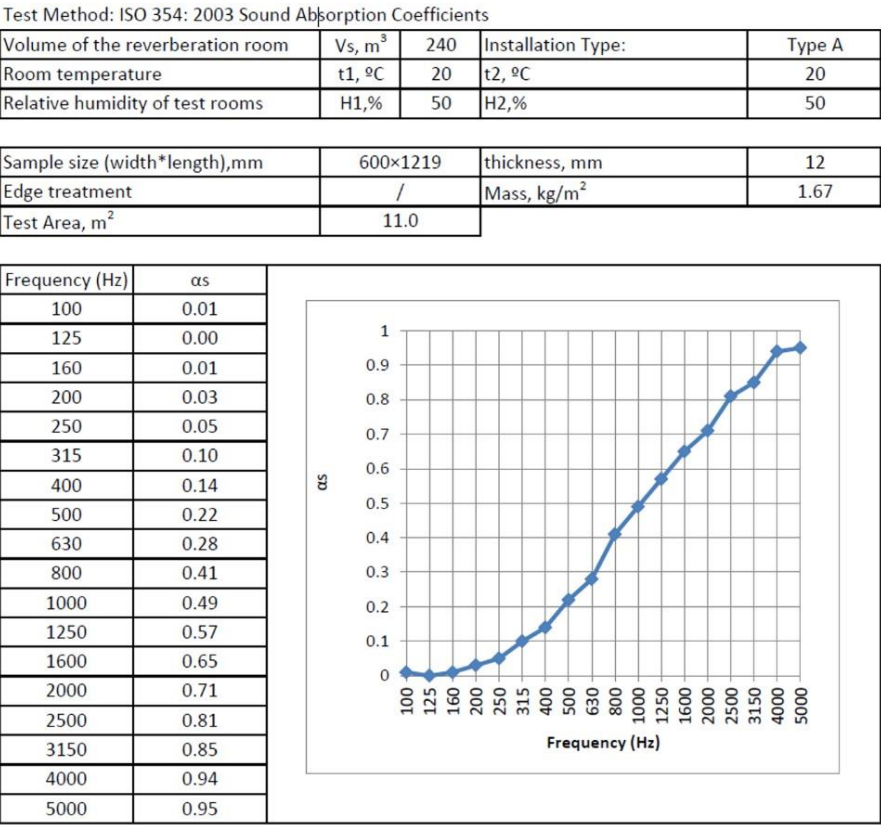


Test Setup: ISO 354:2003 and ISO 11654:1997

The following table features the applied sound absorption coefficients, according to standard ISO 354:2003.

Frequency (Hz)	125	250	500	1000	2000	4000
α_s (12 mm)	0.00	0.05	0.22	0.49	0.71	0.94

The following graph represents the third octave from sound absorptions coefficients (according to sound absorption measurements, ISO 354:2003 in reverberation room).



This summary is intended to provide a summary of general technical information for use by professionals, when selecting and evaluating acoustic and architectural products for healthy designs and beautiful, creative commercial interiors.

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