

# AEUREKA 50

## THE RESILIENT PLYWOOD PANEL WITH VERY HIGH SOUNDPROOFING PERFORMANCES MADE UP WITH HIGH DENSITY RUBBER AND RECYCLED POLYURETHANE

Soundproofing and resilient ecological plywood panel, suitable for acoustic insulation from either airborne and impact noises, made up of two sound impeding layers of high density natural and synthetic recycled elastomers ( $1150 \text{ kg/m}^3 \pm 7\%$ ) of 18 mm thickness each, coupled with an interposed layer of a 20 mm thick recycled polyurethane agglomerate. Besides having very good elastic properties and therefore suitable to be effectively used for floating floor systems, the product has been purposely produced to give an adequate soundproofing power to light structures (the product alone has a  $R_w = 48 \text{ dB}$ ), either horizontal and vertical partitions, which have extreme necessities of acoustic insulation, as for example wooden floors. The panels are produced with an advanced pressing technology which confers the product very good mechanical – physical and acoustic characteristics. AEUREKA 50 can be walked on, has very high mechanical resistances, very good shock absorption and good “elastic memory”; it is also resistant to abrasions.

### ACOUSTIC PERFORMANCES

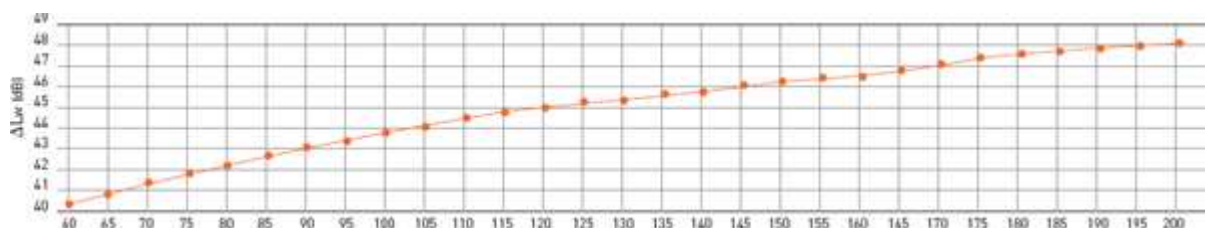
DESCRIPTION	SYMBOL	M.U.	VALUE	NORMS	NOTES
Soundproofing power	( $R_w$ )	dB	48	UNI EN ISO 140-3 UNI EN ISO 717-1	Cert.n° 222998
Absolute dynamic rigidity	( $s'$ )	MN/m <sup>3</sup>	2	UNI EN 29052-1	Cert.n° AE-107002-MG
Resonance frequency	( $f_0$ )	Hz	16	UNI EN 29052-1	Cert.n° AE-107002-MG
Impact sound noise attenuation level	( $\Delta L_w$ )	dB	44	UNI EN 12354-2	Screed weight 115 Kg/m <sup>2</sup>

### A ATTENUATION RATING INDEX OF IMPACT SOUND NOISE PRESSURE LEVEL ACCORDING TO UNI EN 12354-2

m' kg/m <sup>2</sup>	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200
$\Delta L_w$ dB	40,2	40,7	41,2	41,6	42,0	42,4	42,8	43,2	43,5	43,8	44,1	44,4	44,7	44,9	45,2	45,4	45,7	45,9	46,1	46,3	46,5	46,7	46,9	47,1	47,3	47,5	47,7	47,8	48,0

m' : Screed weight

### $\Delta L_w$ VARIATION IN IN RELATION TO SCREED WEIGHT



Screed surface mass....

**THERMAL PERFORMANCES**

DESCRIPTION	SYMBOL	M.U.	VALUE	NORMS	NOTES
Thermal Conductivity	(λ)	W/mK	0,0775	UNI EN 12667:2002	Cert.n° 022-09-the TR
Thermal Resistance	(R)	m² K/W	0,7225	UNI EN 12667:2002	Calculated value
Thermal Transmission	(U)	W/m² K	1,38	UNI EN 12667:2002	Calculated value

**PHYSICAL-MECHANICAL PERFORMANCES**

DESCRIPTION	M.U.	VALUE	TOLERANCES	NORMS
Rubber density	Kg/m³	1150	± 7 %	
Rubber thickness	mm	18(x2)	± 10 %	
Polyurethane density	Kg/m³	90	± 20 %	DIN EN ISO 845 AS 2282.3
Polyurethane thickness	mm	10	± 10 %	
Total thickness	mm	56	± 10 %	

DESCRIPTION	M.U.	RUBBER VALUE	POLYURETHANE VALUE	NORMS rubber - polyurethane	
Resistance to 40% compression	KPa		Min 10,0		DIN EN ISO 3386/1
Elongation percentage at break	%	27	Min 60		DIN EN ISO 1798 AS 2282.6
Heat resistance	°C	Up to + 80	Up to + 120		
Cold resistance	°C	Up to -30	Up to -40		
Fire rating		B2		DIN 4102	
SHORE A hardness		50			

**CHEMICAL PERFORMANCES**

CHARACTERISTIC	PERFORMANCES
Resistance to microbes	Resistant to fungi, insects and microbes attacks
Chemical interactions	Highly resistant to acids and alkaline detergents, retains its characteristics unchanged over time
Electrostatic	Does not accumulate static charge and prevent interaction between materials
Environmental sustainability	100 % recyclable

## SPECIFICATION

High acoustic insulation from airborne ( $R'_w$ ) and impact sound noises ( $L'_{n,w}$ ) of light structures, either vertical and horizontal, obtained with a sound impeding/resilient system resulting from the coupling of the different VALLI ZABBAN products: a sound impeding panel made up of high density  $1150 \text{ kg/m}^3$  recycled elastomers and a panel made up of recycled polyurethane agglomerate of  $90 \text{ kg/m}^3$  density, but with higher elastic properties. AEUREKA 50 is made up of two layers each of 18 mm thickness each elastomers separated by a single interposed layer of 20 mm thick polyurethane agglomerate. The AEUREKA 50 dynamic rigidity is equal to  $2 \text{ MN/m}^3$ , whereas the laboratory certified soundproofing power evaluation index  $R_w$  of the panel alone is equal to 48 dB. Thanks to such performances, using the AEUREKA 50 system by VALLI ZABBAN an effective acoustic insulation to airborne and impact sound noises on light structures will be obtained.

## APPLICATION – FLOOR

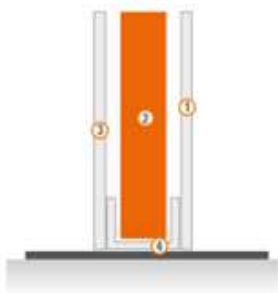


- 1) Finishing
- 2) Lightened trimming screed
- 3) AEUREKA 50
- 4) Wood double planking
- 5) Beams

## SPECIFICATION – WALL -



- 1) 1,5 cm Plaster
- 2) Brick
- 3) AEUREKA 50
- 4) Brick
- 5) 1,5 cm. Plaster



- 1) 15 mm Plasterboard panel
- 2) AEUREKA 50
- 3) 15 mm Plasterboard panel
- 4) Metallic structure

## APPLICATION TYPE - FLOOR

### APPLICATION METHOD

Lay AEUREKA before or after the fixtures bringing the different panels carefully close together and tape along the junctions.

N.B. In case of application underneath the fixtures, make those ones and the walls over the panel.

## APPLICATION TYPE - WALL

### APPLICATION METHOD

It is advised to use the panel both in the inside of traditional double walls and in those built with dry system, in both cases, the application of the panel will be done with a first adhesive layer with single polyurethane component glue to finish all with a mechanical fixing.

## DIMENSIONS AND PACKAGING

SIZE	M.U.	VALUE
Panel Thickness	mm	56
Panel dimensions	m	1x1.2
Panel surface	m <sup>2</sup>	1.2
Weight per m <sup>2</sup>	Kg/m <sup>2</sup>	43.2
Number of panels per pallet	piece	20
Total area per pallet	m <sup>2</sup>	24
Pallet dimension	cm	100x120x120+10

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