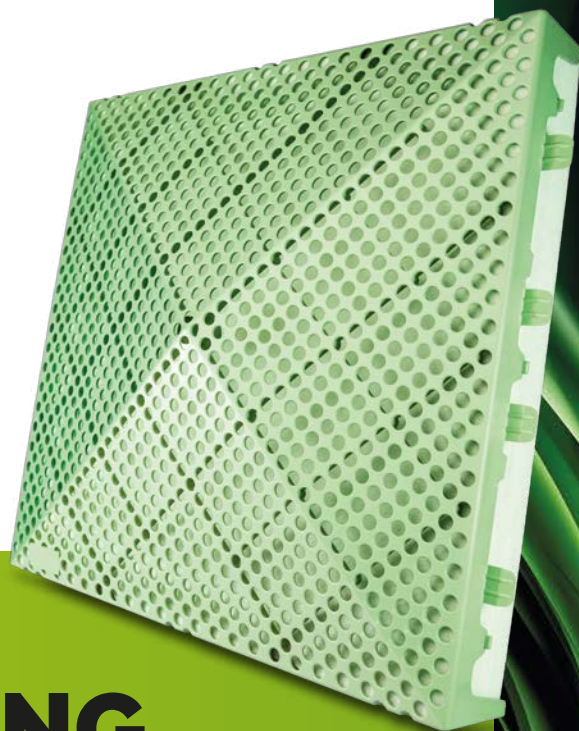


noise
LE DIFESE

WALL



SOUND-ABSORBING CLADDING



WE BUILD SILENCE:

- Sound-absorbing cladding made of PC-ABS, PC or PP
- Anti-Noise systems in recycled, recyclable and innovative material



TECHNICAL DATASHEET

Sound-absorbing cladding
NOISE Le Difese® Wall

Wall is a system based on high-end **plastic sound-absorbing elements** to be mounted on **anodised aluminium rails**, fixed on a load-bearing structure (concrete, masonry, plasterboard, metal, etc.).

The pyramid-shaped sound absorber originates from **recycled compounds** in quantities greater than 60% (depending on the specific application), it is **UV-resistant** and **100% recyclable**.

The system is equipped with a 80-mm-thick **sound-absorbing polyester mat** (density up to 80 kg/m³) achieving high values of acoustic absorption. The mat is placed inside a "shell" (size: 500x500mm; thickness: 3,5mm) that is perforated over 35% of its surface.

The sound-absorbing wall elements are linked by an exclusive **coupling system**, specially designed to allow a **suitable thermal expansion**, ensuring stability and a correct geometry of the panel.



Registered Community Design Patent.

APPLICATIONS

ROAD, RAIL AND AIRPORT INFRASTRUCTURES

Wall is an effective method to **reduce noise pollution** in communication infrastructures (**roads, highways, railways, airports**, etc.). The sound-absorbing barrier allows to obtain an acoustic absorption level **up to 19dB** (class A5), according to UNI EN ISO 354:2003, UNI EN 1793-5 and UNI EN 1793-1:2017.

INDUSTRY AND CIVIL CONSTRUCTIONS

Wall is also successful in the industrial and civil sector for:

- **Reduce noise in production environments**, to contain it within the regulatory limits (Legislative Decree 81/2008 Italy);
- **Absorbing noise** from industrial sites within the limits shown on Table B, DPCM 14/11/1997 and its subsequent amendments;
- **Thermal insulation** of buildings thanks to the low conductivity guaranteed by its internal PET (polyester) mat.





Made of recycled plastic material

The sound-absorbing barriers are produced by injection moulding of PC-ABS, PC or PP compounds, also recycled in quantities greater than 60%.



Entirely recyclable

"Le Difese® Wall" is made of 100% recyclable plastics (shell, sound-absorbing mat).



Paint-free anti-reflective finishing

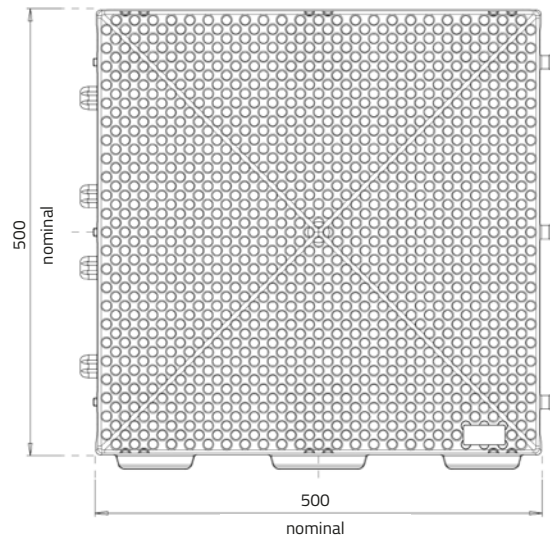
"Le Difese® WALL" does not require any coating or painting process: the plastic material is mass colored, avoiding heavy pollution and dispersion of paint in the environment.



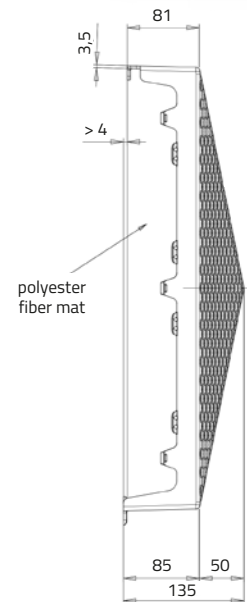
Acoustic and mechanical properties according to European Standards

"Le Difese® WALL" barriers meet all recent European Standards on acoustic and mechanical performance, long-term durability, stability requirements, general safety rules as well as environmental standards and product specifications.

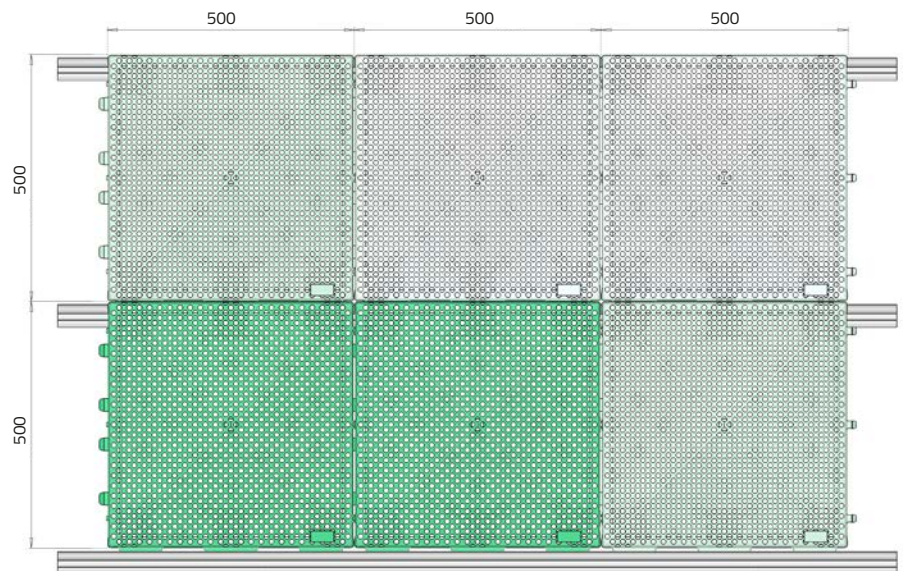
TECHNICAL DRAWINGS



Front view.



Lateral view.



Front view - 6 panels assembly.



PERFORMANCE

TESTED PERFORMANCE	Noise "Le Difese WALL" Polyester Fiber 50+50 kg/m³	Noise "Le Difese WALL" Polyester Fiber 80+50 kg/m³ (65 kg/m²)	Noise "Le Difese WALL" Polyester Fiber 80+80 kg/m³	REFERENCE STANDARD
Sound Absorption	A4 (DLα 12 dB)	A5 (DLα 16 dB)	A5 (DLα 19 dB)	UNI EN 1793-1:2013 UNI EN 1793-3:1999
In-Situ Sound Reflection index	DL _{RI} 11 dB (10.5 dB)	DL _{RI} 9 dB (9.1 dB)	DL _{RI} 9 dB (9.4 dB)	UNI EN 1793-5:2016
Dynamic Load from Snow Clearance	15.0 kN (2mx2m) test carried out on a single element with equivalent load of 0.9375 kN (0.5 m x 0.5 m)	15.0 kN (2mx2m) test carried out on a single element with equivalent load of 0.9375 kN (0.5 m x 0.5 m)	15.0 kN (2mx2m) test carried out on a single element with equivalent load of 0.9375 kN (0.5 m x 0.5 m)	UNI EN 1794-1:2011
Wind and Static Load	3.75 kN/m² test carried out as snow load on a single element, with equivalent load of 0.9375 kN (0.5 m x 0.5 m)	3.75 kN/m² test carried out as snow load on a single element, with equivalent load of 0.9375 kN (0.5 m x 0.5 m)	3.75 kN/m² test carried out as snow load on a single element, with equivalent load of 0.9375 kN (0.5 m x 0.5 m)	UNI EN 1794-1:2011 Appendix A
Self-Weight: Dry Reduced Wet	2.3 Kg 6.1 Kg (estimated with H ₂ O on 20% of polyester volume)	2.6 Kg 6.1 Kg (estimated with H ₂ O on 20% of polyester volume)	2.9 Kg 6.1 Kg (estimated with H ₂ O on 20% of polyester volume)	by piece weighing
Risk of Falling Debris	Class C2 (0.5 KJ)	Class C2 (0.5 KJ)	Class C2 (0.5 KJ)	UNI EN 1794-2:2011 Appendix B
Light Reflectivity	Class 3 - Ref. Green RAL: 6019 Perforated Part 35%: 6.6 - 8.3 - 60.0 Full Part: 6.7 - 55.1 - 60.1 Weighted average: 6.7 - 38.7 - 39.3	Class 3 - Ref. Green RAL: 6019 Perforated Part 35%: 6.6 - 8.3 - 60.0 Full Part: 6.7 - 55.1 - 60.1 Weighted average: 6.7 - 38.7 - 39.3	Class 3 - Ref. Green RAL: 6019 Perforated Part 35%: 6.6 - 8.3 - 60.0 Full Part: 6.7 - 55.1 - 60.1 Weighted average: 6.7 - 38.7 - 39.3	UNI EN 1794-2:2011 Appendix E
Impact of Stones	Meets Requirements	Meets Requirements	Meets Requirements	UNI EN 1794-1:2011 Paragraph C.2
Bush Fire	Class 1 (with sample 60 cm from the ground)	Class 1 (with sample 60 cm from the ground)	Class 1 (with sample 60 cm from the ground)	UNI EN 1794-2:2011
Flame Reaction	Recycled PC-ABS: Flame Reaction class V0; Polyester Fiber: Flame Reaction class Bs2d0	Recycled PC-ABS: Flame Reaction class V0; Polyester Fiber: Flame Reaction class Bs2d0	Recycled PC-ABS: Flame Reaction class V0; Polyester Fiber: Flame Reaction class Bs2d0	UL94 EN 13501-1



STANDARD RAL COLOURS PROPOSED

RAL code	Colour name	RGB	Sample
RAL-1000	green beige	200 186 128	
RAL-1001	pale beige	206 177 129	
RAL-1011	brown beige	171 127 75	
RAL-1012	lemon yellow	220 181 43	
RAL-5012	light blue	17 128 180	
RAL-6019	pastel green	175 207 170	
RAL-6021	pale green	130 156 120	
RAL-6027	turkish green	116 184 181	
RAL-6032	signal green	0 126 78	
RAL-7004	signal grey	151 151 153	
RAL-7032	pebble grey	179 175 156	
RAL-7038	agate grey	172 174 166	
RAL-7044	silk grey	182 178 166	
RAL-7047	telegrey 4	198 198 197	
RAL-9002	grey white	215 214 202	

Noise srl reserves the right to freely change the composition of this sheet. For other extra standard pastel colors the technical feasibility must be evaluated.

