mogu

RADICAL BY NATURE

Pluma Panels

Material Data Sheet

mogu.bio

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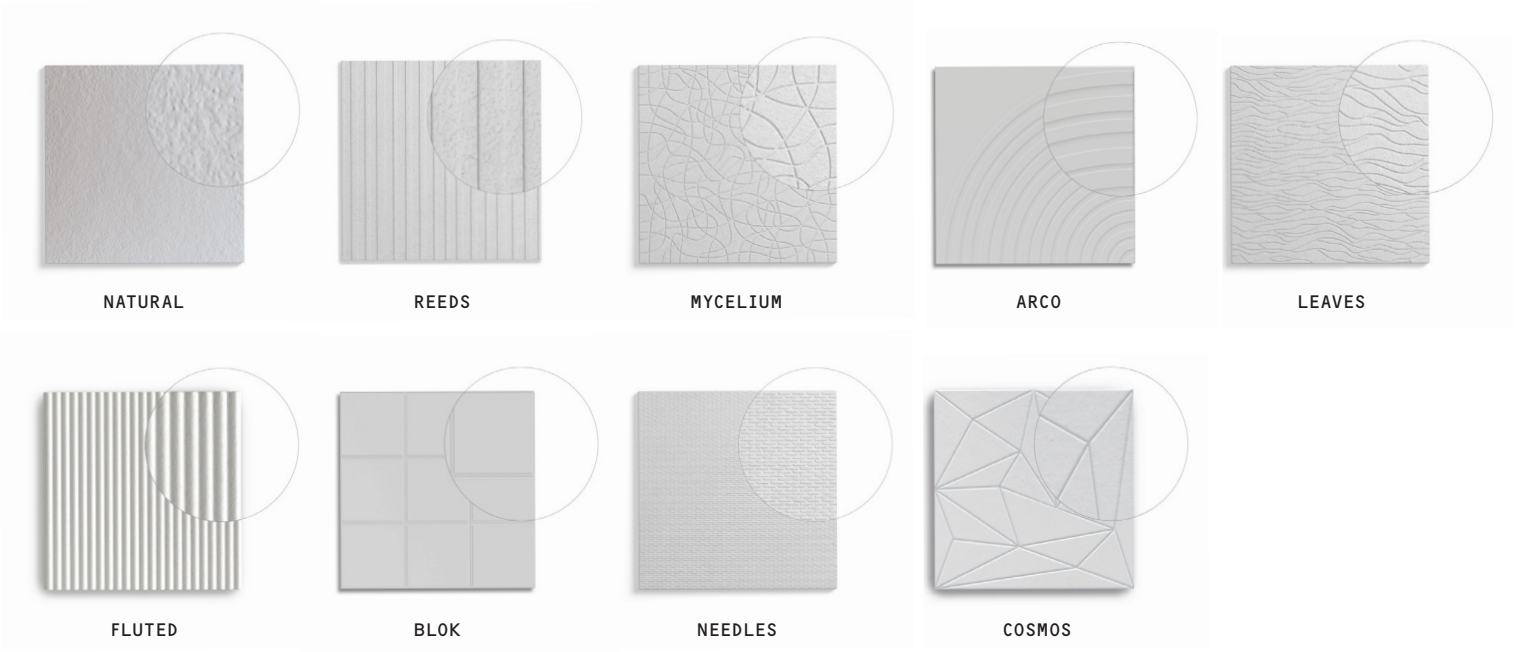
Pluma panels

Mogu PLUMA is a new collection of 100% circular, slim wall-covering panels, with sound-absorbing properties. A revolutionary new collection of totally eco-friendly panels, which combines astonishing Natural technologies with human ingeniousness and engineering.A pioneering product capable of providing an innovative and natural look to all interiors, while enhancing the everyday life thanks to its unique aesthetics and acoustic performance. Mogu PLUMA panels are designed to provide all spaces with an innovative, yet natural look.

Textures

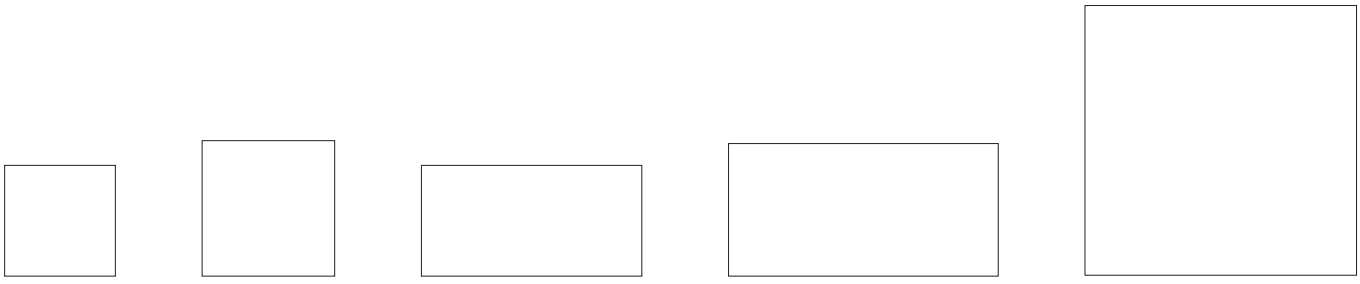


NATURAL | REEDS | MYCELIUM | ARCO | LEAVES

FLUTED | BLOK | NEEDLES | COSMOS

Dimensions & Weights

	W* [mm]	h*[mm]	t*[mm]	sqm	n°/sqm	weight* [Kg/m2]
PLUMA S	500	500	20/30/40	0.25	4	1.0/1.2/1.6
PLUMA M	600	600	20/30/40	0.36	3	1.2/1.5/1.8
PLUMA L	500	1000	20/30/40	0.50	2	2.0/3.0/3.5
PLUMA XL	600	1200	20/30/40	0.72	1.4	3.2/3.6/4.0
PLUMA XXL	1200	1600	20/30	1.92	0.5	7.0/10.8



SMALL – S
500X500 mm

MEDIUM – M
600X600 mm

LARGE – L
500X1000 mm

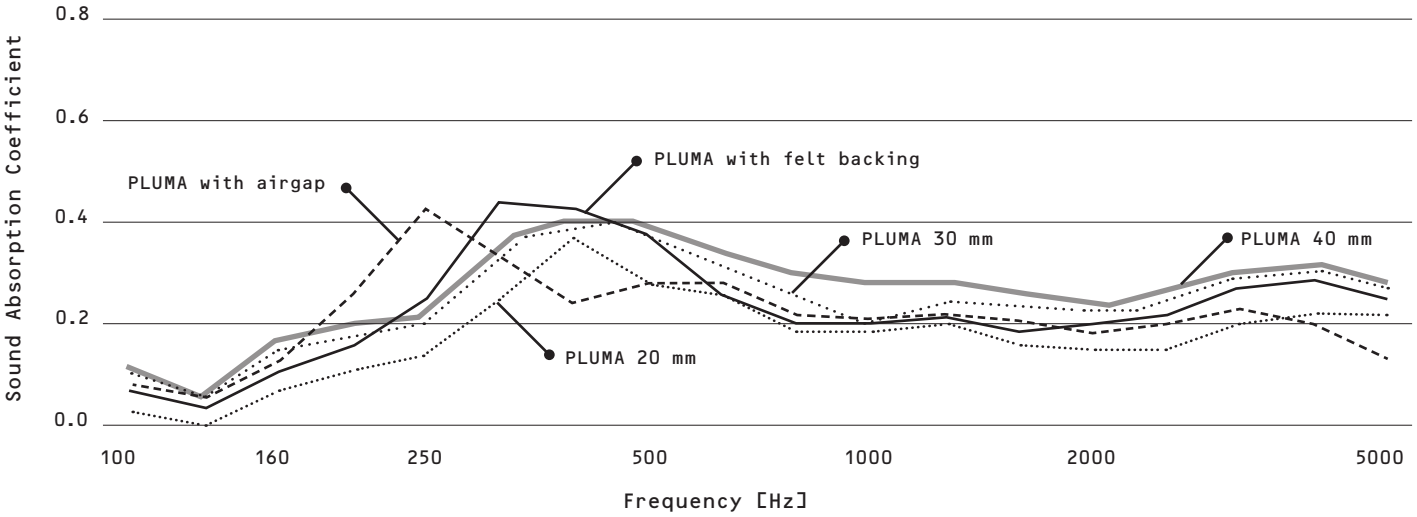
EXTRA LARGE – XL
600X1200 mm

2EXTRA LARGE – XXL
1600X1200 mm

Panels are also available in custom sizes.

* Mogu Acoustic panels may present slight dimensional variations as they are subject to the tolerances of the natural production process that characterise and enhace Mogu's products. However Mogu carries out a very strict dimensional control to ensure a dimensional variation of maximum +/- 1 mm and +/- 2.5 mm for thickness.

Acoustic performance



Acoustic characteristics

	t [mm]	α [125 Hz]	α [250 Hz]	α [500 Hz]	α [1000 Hz]	α [2000 Hz]	α [4000 Hz]
PLUMA 20 mm	20	0.05	0.1	0.3	0.2	0.2	0.2
PLUMA 30 mm	30	0.1	0.2	0.4	0.2	0.2	0.3
PLUMA 40 mm	40	0.1	0.2	0.4	0.3	0.2	0.3
PLUMA with airgap (30 cm)	20 + 30	0.1	0.4	0.3	0.2	0.2	0.2
PLUMA with felt backing (2 mm)	20 + 2	0.05	0.3	0.4	0.2	0.2	0.3

Measurements according to ISO 354 - Reverberation Room Measurement Method.

Reaction to fire & standards

	Fire-proof	Only color	Natural
Classification	B-s2-d0*	C-s2-d0*	D-s2-d0*
Finishing	water-based, eco-friendly, non-halogenated, heavy-metals free	water-based 2K paint, low VOC	none
Texture	compact and tough, available in any NCS color	compact and tough, available in any NCS color	white with small tone variations, slightly soft
Moisture sensitivity	RH > 50%	RH > 80%	RH > 80%

Physical appearance & performance

Product type	Wall, ceiling/false ceiling panels for interior design	Thermal Conductivity UNI EN12664-2	0.050 W/mK (20 mm thickness)
Color	Any NCS color from Mogu Acoustic palette or custom color	TVOC emission rate (µg/m3)*	15
Odor	none with finishing; medium smell with natural touch	VVOC emission rate (µg/m2h)*	none determined
Density	125-220 kg/m3; Depends on the panel thickness	SVOC emission rate (µg/m2h)*	none determined
Fire Reaction UNI EN 13501-2	B-s2-d0		
UV resistance UNI EN 15187	Excellent [grey: 5/5; blue scale: >6]		

* Results for VOC emissions based on 28-days chamber testing. Official results according to Indoor Air Comfort test by Eurofins.

Material Data Sheet

Light Reflectance Value (LRV)

Light Reflectance Value (LRV) measures the percentage of visible light reflected by a surface (such as walls, floors, ceilings, or furniture) at all wavelengths and angles when illuminated by a light source. The LRV scale ranges from 0 to 100, with 0 representing an entirely black (completely absorbing) surface, and 100 indicating a perfectly white (completely reflective) surface.

PINE
LRV:13

MOSS
LRV:20

FERN
LRV:27

LICHEN
LRV:51

FALLS
LRV:15

CREEK
LRV:30

RAIN
LRV:47

DROP
LRV:69

BALOS
LRV:20

TERRACOTTA
LRV:29

SAND
LRV:48

SILT
LRV:67

BARK
LRV:29

HUMUS
LRV:39

MUSHROOM
LRV:52

MYCELIUM
LRV:68

SLATE
LRV:26

ANDESITE
LRV:35

FOSSIL
LRV:52

DOLOMITE
LRV:62

MARBLE
LRV:82

Mogu was founded on the belief that it is possible to employ Nature's intelligence to radically disrupt the design of everyday products, seeking a finer balance between the man-made and the rhythms of the natural ecosystem.

Mogu products are obtained by growing mycelium, the vegetative part of mushrooms, on organic fibres (low-value residues from agro-industrial value chains).

The products are the result of five years of continuous and iterative R&D on mycelium technology, guided by a strong product-driven approach.